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TO

SIR JOSEPH BANKS, BART.

PRESIDENT OF THE ROYAL SOCIETY, &c. &c.

THIS ATTEMPT

TO IMPROVE THE GEOGRAPHY OF INDIA,

AND THE NEIGHBOURING COUNTRIES,

IS INSCRIBED,

BY HIS MUCH OBLIGED, AND

FAITHFUL FRIEND AND SERVANT,

J. RENNELL.

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PREFACE

TO THE FIRST EDITION.

As almost every particular relating to HINDOOSTAN, is become an object of popular curiosity, it can hardly be deemed superfluous to lay before the Public an improved System of its Geography. Indeed, the flattering reception that was given to my former work, on the same subject, has, in a manner, made that an object of duty, which was originally an object of choice: for the public having condescended to receive the imperfect information afforded them in 1782, I felt an indispensible obligation on me, to render that information more perfect, whenever I might possess the means of accomplishing it. I hesitated only at the measure of subjecting them to an additional tax, so recently after the payment of the former one.

A large collection of materials of various kinds, having been added to my former stock, I have been enabled to produce a work of a more perfect kind than the former; and have therefore drawn it on a larger scale: the surface of the present map, exceeding that of the former one, in the proportion of 2 and a quarter to 1.

The scale of this map, is one inch and a half to an equatorial degree: and the quantity of land represented in it, is about equal to one half of Europe. It is contained in four large sheets, which may either be joined together for the purpose of bringing the whole into one point of view, or bound up separately, in an Atlas; as may suit the fancy or convenience of the purchaser.

By the aid of a series of observations of latitude and longitude, taken by Capt. Huddart, along the Malabar coast, or western coast of India, the form of the peninsula, &c. is now brought very near to the truth: and the eastern coast, by the observations of Col. Pearse, is much improved, in the distribution of its parts, although its general form has undergone but little alteration. A measured line has also been drawn from the Bengal provinces to Nagpour, in the very centre of India: which has not only established an important geographical point, in a part where it was most wanted; but has been the means of furnishing a great deal of matter towards filling up the vacant intervals on three sides of that point. Lastly, the war with Hyder Ally and Tippoo Sultan, his successor, has produced much new geographical matter, in various parts of the peninsula, by the marches of the different armies, and their detachments; particularly that of Col. Fullarton, in the southern provinces and Coimbettore. These are the most material acquisitions to the present map, as they, in effect regulate a considerable part of the general outline, and determine the proportions of some of the principal members of it. But

of the kind of materials, which without affecting the general proportions of the map, serve the purpose of filling up the void spaces in it, there will be found very great abundance. In particular, Guzerat, and the Rajpoot provinces, have undergone very considerable improvement; as well as the Panjab country and Sindy. The upper part of the course of the Ganges, to the cow's mouth, or cavern through which the Ganges paſses; and the course of the Gogra river to its fountains; are both inserted from the work of M. Bernoulli. In short, additions and corrections are diſseminated over the whole map: and, in general, if we except the south part of Berar, the western part of the peninsula, and the countries bordering on the river Indus, and the Panjab, the map is filled up in such a degree, as to have no considerable blanks in it.

As Mr. Forster's route from India to Ruſsia furnished some new ideas, and elucidated many former paſsages, I judged it proper to expreſs his route to the Caspian sea, on a separate map; and at the same time to add to it, the countries contiguous to Hindoostan on the north and north-west; so as to include Samarcand, and the marches of Alexander from the borders of the Caspian sea, to the river Jaxartes (the modern Sihon, or Sirr).

In the division of HINDOOSTĀN into soubahs, &c. I have followed the mode adopted by the Emperor ACBAR, as it appears to me to be the most permanent one: for the ideas of the boundaries

are not only impreſsed on the minds of the natives by tradition, but are also ascertained in the AYIN ACBAREE; a register of the highest authority. But for the lower parts of the DECCAN, and the peninsula in general, this standard being wanting, I had recourse to the best information I could get, which was not, indeed, of the most perfect kind: and therefore I directed my attention principally to the state of the modern divisions in those quarters, the impreſsing a clear idea of which, is one principal aim of the work.

It must be observed, that since the empire has been dismembered, a new division of its provinces has also taken place; by which means, some soubahs now form a part of the dominions of three or more princes; and very few are preserved entire. These modern divisions are not only distinguished in the map by the names of the present poſsesors; but the colouring also is entirely employed in facilitating the distinctions between them. So that the modern divisions appear, as it were, in the *fore ground*; and the ancient ones in the *back ground*; one illustrating and explaining the other.

Considering the vast extent of India, and how little its interior parts have been visited by Europeans, till the latter part of the last century, it ought rather to surprise us that so much geographical matter should be collected during so short a period; especially where so little has been contributed towards it by the

ROYAL ASIATIC SOCIETY LIBRARY OF THE BOMBAY BRANCH OF THE

PREFACE.

SINCE the publication of the first edition, much valuable matter, serving both to correct, and to extend, the geography of India, and the countries bordering on it, to the northwest; has been transmitted to me. I have, in consequence, inserted in the body of the map, such of the new matter, as it was possible to assimulate with the old; namely, Capt. Reynolds's route through Malwa; and from Surat to Tippoo's frontier, through Baglana, and the western part of the Deccan. But on the north-west of Delhi, the new materials not only differed as widely from the old, as they excelled them in point of authority; but were also extended through a tract, far beyond the limits of the general map: so that the corrections could no otherwise be accomplished with effect, than by inserting them in a separate map. Accordingly, a new map, on a scale similar to that of the general one, and forming an appendage, or supplement to it; has been constructed: and contains generally, the countries situated between Delhi, Candahar, Badakshan, and the two Thibets: including, of course, all the upper branches of the Indus, and the valley of Cashmere. This new piece of geography (with the exception of that part of it, between Delhi and the Panjab) has been formed of materials most oblig-

ingly communicated by Capt. Kirkpatrick, of the Bengal establishment; and of which materials, a detailed account will be found in its place. And the part which forms the exception, is taken from a MS. map, as obligingly communicated by Colonel Polier: and which is no lefs valuable, from its supplying the deficiency of the other materials, than from the importance, and novelty of its subject.

Having detected a very considerable error, in the relative positions of the two Bucharias, as they stand in our best maps; and having also made a great alteration in the course of the principal branch of the Indus, towards its source; I have re-constructed the map of the countries, situated between the Ganges and the Caspian sea, in order to correct these errors, and to insert other positions, founded on the result of much investigation and enquiry. For the accommodation of the purchasers of the former edition, these additional maps, as well as the letter-prefs of the third section, which relates to them; will be sold separately.

Having been formerly misled, by Mr. Tiefentaller's representation of the course of the Ganges, between Hurdwar and Sirinagur; I have now corrected it, according to the report of some English gentlemen, whose curiosity led them to the foot of mount *Himmaleb*. As Mr. Daniel was amongst the number, we may expect to receive from his pencil, correct drawings of the lower fall of the Ganges (at Hurdwar), and of the romantic scenes in its neighbourhood.

November 22d, 1791.

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EXPLANATION OF THE COLOURING OF THE MAP.

The Colours are used to point out the Boundaries of the principal States now existing in Hindoostan; and these are divided into six Classes, *viz.*

Class I.	The British Possessions; or those of the East India Company, distinguished by - -	Red
II.	The Powers in Alliance with the Company, by	Yellow.
III.	The Mahratta States, by - -	Green.
IV.	The Nizam's Territories, by - -	Orange.
V.	Tippoo Sultan's, by - -	Purple.
VI.	The Seiks, by - - -	Blue.

The following are the Territories comprised in each Class.

I. British Possessions.—Red.

1 Bengal and Bahar, with the Zemindary of Benares.
2 Northern Circars.
3 Jaghire in the Carnatic.
4 Bombay, Salsette, &c.

II. British Allies.—Yellow.

1 Azuph Dowlah. Oude.
2 Mahomed Ally. Carnatic.

III. Mahratta States.——Green.

Deep Green.

Poonah Mahrattas.	Tributaries.
1 Malwa.	1 Rajah of Jyenagur.
2 Candeish	2 ——— Joodpour.
3 Part of Amednagur or Dowlatabad.	3 ——— Oudipour.
4 Visiapour.	4 ——— Narwah.
5 Part of Guzerat.	5 ——— Gohud.
6 ——— Agra.	6 Part of Bundelcund.
7 ——— Agimere.	7 Mahomed Hyat. Bopaltol.
8 Allahabad.	8 Futty Sing. Amedabad.
	9 Gurry Mundella, &c. &c.

Light Green.

Berar Mahrattas.	Tributary.
1 Berar.	Bembajee.
2 Orifsa.	

IV. Nizam-Ally, Soubah of the Deccan.——Orange.

Golconda, Aurungabad, Beder, part of Berar, Adoni, Rachore, &c.

V. Tippoo Sultan.——Purple.

Mysore, Bedhore, Canara, Cuddapah, &c. &c.

VI. Seiks.——Blue.

Lahore, Moultan, and the western parts of Delhi.

Small States, not distinguished by Colours.

1 Succefsors of Zabeda Cawn. Schaurunpour.
2 Jats.
3 Pattan Rohillas. Furruckabad.
4 Adjid Sing. Rewah, &c.
5 Bundelcund, or Bundela.
6 Little Ballogistan.
7 Cochin.
8 Travancore.

ERRATA.

INTRODUCTION.

In the Note, Page xxiii—read, *pages* 147, and 171.
Page xxix, line 3—a comma after *extirpated*.
—— xxx, l. 1—read, *trees*.
—— xxxiii, l. 2—read, *the Prasii*.
—— ib. l. 9—a comma after *short*.
—— xxxviii, l. 7—read, *Periplus*.
—— xlv, l. 7 from bottom—read, *Nagorkote*.
—— xlvi, l. 10 from bottom—read, *Nehrwaleh*.
—— xlvii, l. 7 from bottom,—read, *Nagorkote*.
—— lxvii, l. 19—read, *region*.
—— lxxx, l. 20—read, 230.
—— ib. last line but one—read, *Bejapour*.
Page cx, l. 13—read, *concerning the relative positions*.
—— cxxvii, l. 7 from bottom, after *Gauts*—read, *or mountains of Gatte*.
—— cxxviii, l. 2, after *Gauts—or perhaps more correctly, the countries lying* ABOVE, or BELOW *the Gauts*.
—— ib. l. 6 from the bottom—read, *page* 234.
—— cxxix, l. 19—read, 20 *coffes*, *S*, *or S E*.
—— cxxxiv, l. 4, after CHOHAN—read, *or* SEESODYA.
—— cxxxv, l. 14—add, *Guntoor has since been ceded to the East-India Company*.

MEMOIR.

Page 51, l. 9—read, *Jhylum, or Jhelum*.
—— 76, l. 13—read, *Col. James Browne*.
—— ib. l. 18—read, *E by S*.
—— 78, l. 10—read, *Antiquité Geographique de l'Inde*.
—— 79, l. 6 from bottom—read, *Firosepour, or Ferosepour*.
—— 91, l. 6, after Vol. II.—read, *page* 136, *and also page* 98, *et seq. of the Tukseem Jumma*.
—— 99, l. 10—read, *Jhylum*, or *Jhelum*.
—— 114, l. 9—read, *Jalalabad*.
—— 118, l. 6 from bottom—read, *Shakhawaz*.
—— 120, last note—read, *Mes. ltin*.
—— 125, l. 19—read, *Bucephala*.
—— 127, l. 9—read, *the army was now divided*.
Page 137, l. 1—read, *Punjeberary*.
—— ib. l. 13, after page 109—read, *of the Tukseem Jumma*.
—— 142, l. 4, after page 108—read, *of the Tukseem Jumma*.
—— 154, l. 5—read, *Turung, or Turnug*.
—— ib. l. 6—read, *Heermund*.
—— 155, l. 10—read, *Heermund*.
—— 172, l. 20, after *Dooky*—read, *called also Dakkah, and Dukkah*.
—— 174, l. 7—read, *Rotas*.
—— 186, note—read, *Madarow*.
—— 196, l. 9 from the bottom, read, *the southern parts of the two Scythias*, &c.

INDEX.

Page 416, for *Salpour*, read, *Saipour*.

GENERAL MAP.

In square K i, for *Mehindry*, read *Sabermatty*, *River*.

INTRODUCTION.

HINDOOSTAN, has by the people of modern Europe, been understood to mean the tract situated between the rivers Ganges and Indus, on the east and west; the Thibetian and Tartarian mountains, on the north; and the sea on the south. But strictly speaking, the extent of Hindoostan is much more circumscribed than these limits convey an idea of: and the name ought to be applied only to that part of the above tract, which lies to the north of the parallels of 21° or 22°. The Nerbudda river is, indeed, the reputed southern boundary of Hindoostan, as far as it goes; and the southern frontiers of Bengal and Bahar compose the remainder of it. The countries on the south of this line, according to the Indian geographers, go under the general name of DECCAN; and comprise nearly one half of the tract generally known by the name of the Mogul empire. But as the term HINDOOSTAN has been applied in a lax sense to this whole region, it may be necessary to distinguish the northern part of it, by the name of Hindoostan *proper*. This tract has indeed the Indus, and the mountains of Thibet and Tartary, for its western and northern boundaries: but the Ganges was improperly applied as an eastern boundary; as it intersects in its course, some of the richest provinces of the empire: while the Burrampooter, which is much nearer the mark as an eastern boundary, was utterly unknown. In this circumscribed state, the extent of Hindoostan *proper*, is about equal to France, Germany, Bohemia, Hungary, Switzerland, Italy, and the Low Countries, collectively: and the Deccan and peninsula, are about equal to the British

Islands, Spain, and Turkey in Europe. I have here called the tract which lies to the south of the Kistna river, the peninsula; in conformity to general practice; although its form does by no means warrant it. The term DECCAN, which signifies the SOUTH, is applied (as before said) in its most extensive signification, to the whole region that lies on the south of Hindoostan *proper:* I apprehend, however, that in its proper and limited sense, it means only the countries situated between Hindoostan *proper*, the Carnatic, the western sea, and Orifsa: that is, the provinces of Candeish, Dowlatabad, Visiapour, Golconda, and the western part of Berar.

The term INDIA, by which this country, as far as it was known, is distinguished in the earliest Grecian histories, appears to be derived from HIND, the name given it by the ancient Persians; through whom, doubtlefs, the knowledge both of the country and its name, were transmitted to the Greeks. We have the strongest afsurances from Mr. Wilkins, that no such words as HINDOO, or HINDOOSTAN, are to be found in the Sanscrit Dictionary. It appears that the people among whom the Sanscrit language was vernacular, styled their country BHARATA;* a name which is, I believe, quite novel to the ears of the learned in Europe. It is probable then, that the word HIND furnished that of INDIA to the Greeks; and the termination STAN, signifying country in the Persic, is of more modern date: for we find it joined to many of the ancient Persian names of countries; as to Dahæ, whence Dahestan;

* See the notes to the *Heetopades*, recently translated from the Sanscrit (or Sanscreet), by Mr. Wilkins, page 332. This gentleman has the merit of being the first European who acquired the knowledge of the Sanscrit language: which was that of ancient Hindoostan (or Bharata), but which ceased to be the vernacular tongue, soon after the Mahomedan conquest, in the 11th century. A few years ago it was known only to the Pundits or learned Brahmins; who religiously kept it from the knowledge of all but their own order: it being the sacred depositary of their religious institutions, and mysteries; and which it was inconvenient to communicate to the vulgar, otherwise than through the medium of their own comments, and interpretations. The honour done Mr. WILKINS on this occasion, reminds us of the communications made to HERODOTUS, by the Egyptian priests: and it is a fair inference, that the personal merit of both these men, had a principal share in obtaining so distinguished a preference.

Tapuri, Taberi-stan; and Corduene, Curdi-stan: together with many others. It has happened in the application of this name, INDIA, as on similar occasions; that is to say, it has been applied, not only to the country originally designed by it, but to others adjacent to, and beyond it:* for the countries between Hindoostan and China, came to be called the *further* India; or India *extra Gangem*: whereas, Hind, or India, properly belonged only to the country of the people called Hindoos; or those of India *intra Gangem*. The name is as ancient as the earliest profane history extant: and this may serve, among many other instances, to prove the high antiquity of the Persian language.

India has in all ages excited the attention of the curious, in almost every walk of life. Its rare products and manufactures, engaged that of the merchants; while the mild and inoffensive religion of Brama, and the manners inculcated by it, attracted the notice of philosophers. The structure of its language too, is remarkable; and has a claim to originality. It had been happy for the Indians, if they had not attracted the notice of a clafs of men more inimical to the happinefs of mankind: for the softnefs and effeminacy induced by the climate, and the yielding nature of the soil, which produces almost spontaneously, invited the attacks of their more hardy neighbours; and rendered them an easy prey to every foreign invader. Hence we find them succefsively conquered by the Persians, Patans, and Moguls: and it is probable, that, like the Chinese, they have seldom had a dynasty of kings, from among their own countrymen. The accounts of 22 centuries ago, represent the Indians as a people who stood very high in point of civilization: but to judge from their ancient monuments, they had not

* The term LYBIA belonged at first only to the countries of Africa that were colonized by the Greeks; but was afterwards applied by them to the whole continent. The Romans, in a similar manner, extended the name of AFRICA, which originally belonged only to the territories of Carthage, to the whole continent; or, at least, to as much as they knew of it. ASIA was applied at first only to Natolia; which took the name of LESSER ASIA, afterwards, when ASIA was applied to all the known parts of that continent.

carried the imitative arts to any thing like the degree of perfection attained by the Greeks and Romans, or even by the Egyptians. Both the Hindoos and Chinese appear to have carried the arts just to the point requisite for useful purposes; but never to have approached the summit of perfection, as it respects taste, or boldnefs of design.

The principal monuments of Hindoo superstition are found in the peninsula. Some have concluded from this, and from other circumstances, that the original seat of the Hindoo religion was there. Others, perhaps with more appearance of probability, suppose it to have originated on the banks of the Ganges. Monuments of a superstition, apparently anterior to the Hindoo, exist in the caves of Salsette and Elephanta, two islands on the western coast of India: these consist of apartments of extensive dimensions, excavated from the live rock, and decorated with figures and columns.

India was but little known to the Greeks until Alexander's expedition, about 327 years before Christ. HERODOTUS, who wrote about 113 years before, appears to have heard but indistinctly of any but the western part of it; and that only, by its being tributary to Persia. He informs us (Book IV.) that Darius Hystaspes had dispatched Scylax of Caryandra to explore the Indus, about 508 years before Christ; and that he departed from *Caspatyrus* and *Pactya*, which were situated near the head of the Indus. Herodotus continues to say, that the Indians who inhabit towards the north, and border on these territories of Caspatyrus and Pactya, resemble the Bactrians (that is, their neighbours) in manners: and are the most valiant people of all India. The eastern part of India, says he, is rendered desert by sands: which description applies only to the country lying east of the Indus, and south of the PANJAB:* and this shews pretty evidently, that Herodotus's knowledge of India, as to particulars, extended no further than to the above tract: and a collateral proof is, that he does not mention

* The country watered by the 5 eastern branches of the Indus. See page 80 of the Memoir.

the Ganges, which became so famous a century afterwards. Indeed, he tells us very plainly, that this sandy desert was the extreme point of his knowledge eastward.

With respect to Scylax's discoveries, this is Herodotus's account. "Darius being desirous to know in what part the Indus (which is the second river that produces crocodiles) runs into the sea, sent *Scylax* of *Caryandra*, with others of approved fidelity, to make the discovery. They departed in divers ships from *Caspatyrus*, and the territories of *Pactya*;* sailed down the river eastward, to the sea; and then, altering their course to the west, arrived in the 30th month, at that place where the King of Egypt (Nechao) had caused the Phenicians I mentioned before to embark, in order to surround the coast of Lybia (Africa). After this voyage, Darius subdued the Indians, and became master of that sea."—HEROD. Book IV. In another place in the same book, he takes notice of some Indian nations situated to the southward, very remote from the Persian conquests; and whose complexions were as black as Ethiopians; these ought to be the people of the peninsula. He had also learned that they killed no animals, but contented themselves with the produce of the earth: that they exposed those whom they deemed too ill to recover; lived chiefly upon rice; had horses of a smaller breed than their western neighbours; and that they manufactured their fine cotton wool in cloathing.

Now, after the above account of Scylax's expedition, can we give credit to the story of Alexander's supposing that he had discovered the head of the Nile, when he was at the Indus? Are we to suppose that Aristotle concealed the books of Herodotus from his pupil? or, on the contrary, ought we not rather to believe, that the matter of them was on his mind; and that the discoveries of Scylax, made within 180 years of his own time, and of a kind

* I conclude that *Pactya*, is the modern *Pekhely*. See pages 108 and 116 of the Memoir. Some have supposed *Caspatyrus* to mean *Cashmere*: but this is improbable, from its situation, which is remote from the Indus: but *Pekhely*, or *Puckholi*, borders on it.

that particularly interested him, were detailed to him, when we find them given incidentally in Herodotus?

The story of Alexander's surprise at seeing the tides in the Indus, appears to me equally improbable; seeing that the same Herodotus (Book II.) speaks very particularly of the tides in the Red Sea; and describes them as being not only strong, but ebbing and flowing every day. [That most intelligent and ingenious traveller, M. Volney, informs us, that the tide ebbs and flows three feet and a half at Suez.] Arrian takes no notice of the tides until Alexander's fleet had arrived near the mouth of the river. It is true that the tide in the Indus does not go up so high as in other rivers of equal bulk, and that run on so small a descent; but, nevertheless, as the tide is perceptible at 50 or 60 miles above the river's mouth,* we may conclude that it could hardly escape the notice of Alexander and his people, in their voyage from Pattala to the sea; supposing they had not been apprized of the circumstance. Besides, Arrian's account of the coming in of the tide, which did so much mischief to the fleet, is descriptive of the BORE, or sudden influx of the tide, in a body of water, elevated above the common surface of the sea; such as occurs in the Ganges, &c. He says, those ships that *lay upon the sand*, were swept away by the fury of the tide; while those that *stuck in the mud*, were set afloat again without damage. To the generality of readers, no reason will appear why the circumstances of the ships should be different, in the mud, and on the sand: the fact is, that the bottoms of channels, in great rivers, are muddy; while their shallows are formed of sand: and it is the nature of the bore to take the shortest cut up a river; instead of following the windings of the channel: consequently, it must crofs the sand banks it meets in its way; and it will also prove more destructive to whatever it meets with aground, than what is afloat.

* The tide in the Indus is perceptible at about 65 miles above its mouth; according to the information of M. Callander, who resided a considerable time at Tatta, near the head of the delta of the Indus. In the Ganges the tides are perceptible at 240 miles up: and in the river Amazons, at 600.

It appears also from Herodotus (Book III.), that the parts of India bordering on the Indus, were subjected to regular tribute, if not totally reduced, under the Persian government: for in enumerating the 20 Satrapies of Persia (under Darius Hystaspes), India is reckoned one of them, and is rated the highest: it being assessed in the proportion of 4680 Eubean talents of silver, out of 14,560, the whole annual revenue. To explain this, the author informs us, that the Indians were very numerous; and that the tribute charged upon them was proportionably great. It is worthy of remark, that this tribute was paid in gold, whereas that of the other Satrapies was paid in silver. Much light is thrown on this circumstance, by the intelligence furnished by the AYIN ACBAREE; namely, that the eastern branches of the Indus, as well as some other streams that descend from the northern mountains, yield gold dust (See the Index, article *Gold*). We are told on the same occasion, by Herodotus, that gold was estimated about that time, at the value of 13 times its weight in silver.

Alexander's expedition furnished the Greeks with a more extensive knowledge of India; although he traversed only the countries mentioned by Herodotus: that is, the tract watered by the Indus, and its various branches, and adjunct rivers. But the spirit of inquiry was now gone forth; and the long residence of Megasthenes, the ambassador of Seleucus, at *Palibothra*, the capital of the PRASII, furnished the Grecians with the principal part of the accounts of India, that are to be found in Strabo, Pliny, and Arrian: for Megasthenes kept a journal, and also wrote a very particular account of what he had seen and heard, respecting India in general, during several years residence: which account existed in Arrian's time. His embassy was about 300 years before our æra.

The communication by land, between the Syrian empire and India was dropt very early; for Bactria soon became independent: and by that means, the link of the chain that connected India with Syria, was broken. The Indian trade was about the same time

transferred from Tyre to Alexandria in Egypt, where it flourished under the auspices of the Ptolemies, until Egypt became a Roman province; and was continued on a more extensive scale under the Romans themselves: nor did it forsake Alexandria, until the *rediscovery* of the paſsage by the Cape of Good Hope. I shall take occasion to speak more fully concerning the particulars of the navigation from the Red Sea to India, hereafter.

This traffic opened to the Egyptians and Romans a knowledge of the coasts and products of India, as we find by various notices in the abovementioned authors; and in Ptolemy in particular. But considering how much the detail of the coasts was known to him, as is evident by his map (Tab. X. Asiæ), it is very extraordinary that the general form of it should be so far from the truth: for he makes the coasts between the Indus and Ganges, to project only in a slight curve; whereas, they are known to form the sides of a triangle, whose perpendicular almost equals its base; Cape Comorin being the apex of it. Whoever compares the proportional dimensions of India, found in Diodorus Siculus, Pliny, and Arrian, will find them tolerably just: and will be inclined to think that the worst set of ancient maps of India has travelled down to us: and that Ptolemy, in constructing his map of that part, did not expreſs the ideas of well-informed people of his own time, on that subject. Pliny was about 60 years before Ptolemy; and Arrian about 20 years after Ptolemy: their accounts of the dimensions of India, were taken from *Eratosthenes* and *Megasthenes*.

Diodorus says that India is 32,000 stadia from north to south, and 28,000 from east to west: that is, the breadth is seven-eighths of the length.

Arrian gives the measures collected by Eratosthenes and Megasthenes; and says, that "India is bounded on the west by the Indus; on the north by a continuation of Mount *Taurus*, called in different parts, *Paro-pamisus*, *Emodus*, and *Himaus*; and on the south, by the ocean, which also shuts up the eastern parts of

it.* Few authors (says he) have given us any account of the people that inhabit *towards the mouths of the Ganges, where* PALIBOTHRA *is situated.*"

From the mountains at the head of the Indus, to its mouth, according to Eratosthenes, is 13,000 stadia; and from the said mountains, to the eastern sea, the extent is somewhat leſs: but as a huge tract of land runs out 4,000 stadia into the sea (meaning the peninsula) it may be reckoned 16,000 stadia. From Palibothra to the western extreme of India, measured along the great road, is 10,000 stadia: and the whole length (that is, from east to west) is 20,000 stadia. Arrian likewise gives the measures according to Megasthenes, who reckoned India 22,300 stadia from north to south; and 16,000 broad, from east to west; making that the breadth, which Eratosthenes reckons the length. We may observe, that Megasthenes's proportion is, on the whole, the truest: for India is about 28 degrees of a great circle in length, from north to south; or from the Indian Caucasus to Cape Comorin: and about 20 in breadth, from the Indus to the mouth of the Ganges: and if we reckon from the most distant mouth of each river, it will be 22 degrees in breadth. This shews that Arrian had as just an idea of the proportional dimensions of India, as *we* had 40 years ago; for we then reckoned it narrower than the truth by at least two degrees. It is impoſsible to tell what length Megasthenes meant to expreſs by a stade, as there appears to be so considerable a variation in the length of this itinerary measure, at different times: but by proportioning the number of stades, to the number of degrees, included in the above measures of India by Megasthenes, there should be 800 stades in a degree of a great

* Here it would appear that Arrian followed the geography of Alexander, who supposed India to be the most eastern part of Asia; and that the shore of the ocean, from the mouth of the Ganges, took a quick turn to the north and northwest: for he supposed the Caspian lake to be a gulf of it. [Vide his speech on the banks of the Hyphasis.] But Ptolemy, as we are given to understand, had, before the time of Arrian, described SERICA, and the borders of SINÆ: that is, the countries bordering on the west and N W of CHINA; the country of the ELUTHS; and part of Tartary.

circle. M. D'Anville has at different times reckoned 1050, and 1100. I conceive it probable that Megasthenes gave the measures according to the *road distance*, from one extreme of the country to the other; and not according to the horizontal distance, or actual length and breadth of the country. Part of the apparent differences, in the length of the stade, may arise from these different methods of reckoning distances.

Pliny gives the measures along the coasts between the mouth of the Ganges, and *Pattala* (or Tatta) in the mouth of the Indus, at 3320 miles (Roman miles, I suppose, of 1000 paces). The true measure of these coasts, rejecting the sinuosities, and attending only to the general form of it, is 40 degrees of a great circle. M. D'Anville allows 75 Roman miles to a degree: and by this rule, the above number of miles will come out 44 degrees, instead of 40, the true measure. But if the pace be reckoned at 4 feet 10,02 inches, English, there ought to be $78\frac{1}{2}$ Roman miles to a degree; and by this calculation, the 3320 Roman miles will be 42°; or within $\frac{1}{21}$ part of the truth. Whichsoever of the two calculations may be adopted, it is clear that Pliny knew nearly the form of the peninsula; and that Ptolemy, who living at Alexandria, might be supposed to be in the way of obtaining the best information on the subject, was, in truth, ignorant of the general form of it, although he knew so much concerning the particulars.

Arrian's Indian history, which is extremely curious, and merits more notice than it commonly meets with, shews us how very little change the Hindoos have undergone in about 21 centuries, allowances being made for the effect of foreign conquests; which, however, have produced fewer changes here, than they could have done any where else: for customs, which in every country acquire a degree of veneration, are here rendered sacred, by their connexion with religion; the rites of which are interwoven with the ordinary occurrences of life. To this, and to the seclusion from the

rest of mankind, inculcated by the Braminical religion, we are to ascribe the long duration of the Hindoo religion and customs; which are only to be extirpated together with the very people among whom they prevail: and which have been proof against the enthusiasm and cruelty of the Mahomedan conquerors; nay more, have taught a leſson of moderation to those conquerors; who at last saw no danger arising to the state, from a religion that admitted no proselytes.

We are at the first view surprised to find that Arrian, who profeſses to treat of India, should confine himself to the description of a particular part only, while he had authors before him who had treated the subject at large. It may, however, be accounted for in this manner, that he chose to follow those only, who had been eye-witneſses to what they wrote; not compilers: and it is pretty clear that his account of India, is meant chiefly to illustrate the history of his hero. The following particulars, selected from among others, will shew to those who are conversant with India, how nearly the ancient inhabitants resembled the present. 1. The slender make of their bodies. 2. Their living on vegetable food. 3. Distribution into sects and claſses: and the perpetuation of trades in families. 4. Marriages at seven years of age: and prohibition of marriages between different claſses. 5. The men wearing ear-rings; parti-coloured shoes; and veils, covering the head, and great part of the shoulders. 6. Daubing their faces with colours. 7. Only the principal people having umbrellas carried over them. 8. Two-handed swords: and bows, drawn by the feet. 9. Manner of taking elephants; the same as in the present age. 10. Manufactures of cotton, of extraordinary whiteneſs. 11. Monstrous ants: by which the *Termites*, or white ants are meant; though exaggerated. [Herodotus, Book III, also mentions the ants: and his account is more extravagant than Arrian's.] 12. Wooden houses, on the banks of large rivers; to be occasionally removed, as the river changed its course. 13. The *Tala* tree, or

Tal; a kind of palm. 14. The Banian (or Burr tree) and the Indian devotees sitting under them.

We may perceive, however, on a reference to Arrian, that in many of the above particulars, he had either been indistinctly informed, or else mis-informed; as in the case of the Tal tree; the white ants (which he discredits, at the time he relates it) and the manner in which the people daub their faces. The wooden houses, are, as far as I know, peculiar to the side of the Indus; and are remarked to be so in the Ayin Acbaree. Arrian informs us, that he took his account of India from Nearchus and Megasthenes. In the account of the wooden houses, it may be perceived that he followed Nearchus; who seeing them on the side of the Indus, concluded they were in use every where else. As to Megasthenes, Arrian thought he had not travelled far over India; although farther than Alexander's followers. This opinion may serve partly to explain, why Arrian did not preserve the journal of Megasthenes, by inserting it in his history of Alexander; or in his account of India.

His geography of India relates chiefly to the northern parts, or those seen by Alexander and Megasthenes. And his catalogue of rivers, most of which are also to be found in Pliny, and among which we can trace many of the modern names, contain only those that discharge themselves into the Ganges or Indus: such as *Cainas*, the Cane; *Cofsoanus*, Cosa, or Cofs; *Sonus*, Soane; *Condochates*, Gunduck; *Sambus*, Sumbul, or Chumbul; *Hypanis*, Gogra; *Commenases*, Caramnafsa, &c. &c.

Of the different histories of Alexander that have travelled down to us, that by Arrian appears to be the most consistent; and especially in the geography of Alexander's marches, and voyage in the Panjab; which country, by the nature of its rivers, and by their mode of confluence, is particularly favourable to the task of tracing his progrefs. Diodorus and Curtius, had, or ought to have had the same materials before them, as Arrian: that is, the journals or

relations of Ptolemy and Aristobulus; who as friends and companions of Alexander, had opportunities of being well informed. We may conclude also, that there were among the followers of Alexander, journalists of a very different stamp; and indeed, the experience of our own days furnishes us with examples enough of that kind, to make it probable: and there are also to be found, compilers, who according to their tastes and dispositions, prefer the relation of the marvellous, to those of the sober and rational kind. Such as these, we may conceive Diodorus and Quintius Curtius to be; the latter particularly, under whose hand every incident grows into a miracle or wonder. Arrian too, relates his wonders; but in such a manner, as not to commit himself: or, as if he meant rather not to withhold what he thought himself bound to communicate, than as if he believed them himself, or wished to inculcate a belief of them in others.

It is to be regretted that Arrian did not preserve the journal of Megasthenes, as well as that of Nearchus. The lofs of Bæton's, or Iviton's book, which contained the geography of Alexander's marches, is also to be regretted. It existed in the time of Pliny, who quotes him: but I think, if Arrian had seen it, he would have been more particular in his geography, in certain places; as he ordinarily studies to be. Certainly, Arrian had not read Herodotus attentively: otherwise he would not have paſsed over in silence the voyage of Scylax down the Indus; nor represented his hero, as being ignorant of so curious a fact as the tides must have appeared, to those who read the same book. But that he had read part of Herodotus, is evident by his quoting his opinion respecting the delta of the Nile; and by an allusion to his account of the ants that dug up gold, in India, &c.

There is no reason to doubt that the Hindoo or Braminical religion was universal over Hindoostan and the Deccan, before the time of Alexander's conquest, if we regard the notices afforded by Herodotus and Arrian. Nor is it more extraordinary that one religion

should prevail over India, although composed of distinct governments, than that the Christian religion should prevail over a larger tract in Europe; or the Mahomedan over a still larger tract in Europe, Asia, and Africa. But although there might be an universality of religion, there were, as the learned well know, many distinct languages; and history, both ancient and modern, gives us the most positive assurances, that India was divided into a number of kingdoms or states, from the time of Herodotus, down to that of Acbar. Not only Herodotus, Diodorus, Pliny, and Arrian, are positive as to this point, but even Abul Fazil, who composed a history of the Indian provinces, in the reign of Acbar, in the 16th century. It is probable, that the almost universality of religion, and the union of so large a portion of this vast region, under the family of Tamerlane (particularly under Aurungzebe) has occasioned an idea, though a very erroneous one, that the Mogul empire, so called from the Mogul (or Mongul) dynasty, or that of Tamerlane, was always under one head.

But whatever kind of division may have taken place in the rest of Hindoostan, there appears to have been, generally, a large empire or kingdom, which occupied the principal part of that immense valley or plain, through which the Ganges takes its course: the capital of which has fluctuated between Delhi and Patna, as the limits of the empire have varied. That such a one does not exist at present, is probably owing to the Bengal provinces being in the hands of foreigners: but if we consider the union of interests between Bengal and Oude, the case is not essentially altered. Leave matters to their natural course, the whole valley will form one state again. The kingdom I speak of, was that of the Prasii and Gangaridæ, in the times of Alexander and Megasthenes: and which was very powerful, as appears by the strength of its armies, and the number of elephants trained to war. It seems to have extended westward to the Panjab country: and if *Palibothra* stood on the site of Patna, as late accounts seem to render probable (see

page 50 of the Memoir), we may suppose that it included at least part of Bengal. In effect, the kingdom of Prasii could not well be of lefs dimensions than France: and the state of it (according to Arrian) was rich, the inhabitants good husbandmen, and excellent soldiers: governed by nobility, and living peaceably; their rulers imposing nothing harsh, or unjust, upon them. Those who are fonder of contemplating the silent happinefs of a whole people, than of tracing the steps of a conqueror, will be gratified on reflecting that Alexander stopt short on the borders of the country above described.

The trade from the western world to India, which has ever enriched those who have carried it on, has often changed hands, and been turned into different channels. A paſsion for Indian manufactures and products, has actuated the people of every age, in lower Asia, as well as in the civilized parts of Europe: the delicate and unrivalled, as well as the coarser and more useful, fabrics of cotton, of that country, particularly suiting the inhabitants of the temperate regions along the Mediterranean and Euxine seas. To this trade, the Persian and Arabian gulfs opened an easy paſsage; the latter particularly, as the land carriage between the Red Sea and the Nile, and between the Red Sea and the Mediterranean, took up only a few days. It is highly probable, and tradition in India warrants the belief of it, that there was, from time immemorial, an intercourse between Egypt and Hindoostan; at least, the maritime part of it: similarity of customs in many instances (as related of the ancient Egyptians, by Herodotus, and which can hardly be referred to physical causes) existing in the two countries. The intercourse, we may conclude, was carried on by sea; if we consider the nature of the intervening countries, and the seat of the manufactures: and it might, moreover, be expected, that a nation so enterprising as to undertake the circumnavigation of Africa (as, there can be no doubt, the Egyptians did, under the Pharaohs), would scarcely leave unexplored the coasts of a sea so much

nearer; and which, from the regularity of the periodical winds, was so easy of acceſs. Whether Solomon's profitable traffic included that of India, there are, I believe, no means of determining; but it appears highly probable that it did: as also that the *voyages of three years*, made by the ships that arrived at *Tarshish*, were to the remote parts of Africa. Solomon's fleets were dispatched from the ports of the Red Sea; David's conquest of Idumea (Edom) giving him poſſeſſion of the ports in the north-eaſtern branch of that sea. Tyre was founded about two centuries and a half before this period: and from the very flouriſhing state she was in, under Hiram, the cotemporary of Solomon, it may be concluded that her merchants poſſeſſed the greatest part of the trade of the known world, at that time; and the trade of the east among the rest, in all probability. Commerce being so ready a way to riches, it is no wonder that so enlightened a prince as Solomon, should profit by the example of his neighbours, and avail himself of his situation, from the enlarged state of his kingdom, which extended from the Euphrates to the Red Sea, and to the borders of Egypt (1 Kings, chap. iv. ver. 24); and which opened to him two of the great avenues to the east, by way of the Red Sea, and the Persian Gulf. M. Volney's idea, reſpecting the object that Solomon had in view, when he took poſſeſſion of Palmyra, is, in my opinion, no leſs probable than ingenious; namely, to use it as an emporium of the East India trade, by way of the Persian Gulf, and the course of the Euphrates. This was about 1000 years before our æra. But Solomon's trade, notwithstanding, was merely temporary; and reminds us of some feeble efforts, made in our own days, by an inland prince, who was constrained to borrow the mariners of the modern Tyre, as Solomon did those of the ancient. It was, no doubt, unsuitable to the genius of a commercial state, to aid a rival power: but either the same genius in individuals might lead them to embark in lucrative schemes, that were detrimental to their country; or it might be a temporizing policy on the part of

the state. Whether the Indian trade was carried on at the same time, by the Tyrians and Egyptians, as well as by the Judeans, cannot now be ascertained; but I think it probable that it might; and that, both by the route of the Persian Gulf, and the Red Sea; as we have seen it in our days. But whatever might be the mercantile state of Tyre in the days of Solomon, we find it about a century after, establishing a colony at Carthage; and about three centuries after that, its greatneſs was proverbial: I mean, about the date of Ezekiel's prophecy concerning it.

When Tyre fell into the hands of Alexander (before Christ 332, and about 260 after the time of Ezekiel), that city was in full poſſeſsion of the Indian commerce. The route of their trade from India, was up the Red Sea to *Eziongaber*; and thence acroſs the deserts to *Rhinocorura*, a town on the Mediterranean, and on the common frontiers of Palestine and Egypt: both of which countries were then in the hands of the Persians. From Rhinocorura, the goods were carried by sea to Tyre, and circulated from thence. The destruction of Tyre by Alexander, and the consequent foundation of Alexandria, turned the trade into a new channel; or rather, perhaps, returned it into its ancient one, Egypt. The Ptolemies, into whose hands Egypt fell, on the division of Alexander's empire, bestowed a fostering care on the new emporium, which also became the capital of the kingdom. Ptolemy Philadelphus constructed a canal from *Arsinoe* (near the present Suez) to the Pelusiac branch of the Nile: and afterwards, poſsibly because of the tedious and dangerous navigation of the upper part of the Red Sea, founded the city of *Berenice* on the western side of that sea, and nearly under the tropic (that is, 450 miles below Suez), from whence the merchandise was transported acroſs the desert of Thebais, to Coptus on the Nile; and thence, down the stream of that river, to the neighbourhood of Alexandria; which thus became the centre of trade between the eastern and western world; and, of course, one of the most opulent cities in either. It would appear,

that under the Ptolemies, the Egyptians extended their navigation to the extreme point of the Indian continent, and even sailed up the Ganges to Palibothra.

Alexandria held its rank as an emporium, even after Egypt became a Roman province: and preserved it in a considerable degree, during the various revolutions that happened in the east;* until the *re-discovery* of the passage round the south point of Africa, about 300 years ago, turned the bulk of the Indian trade into an entire new channel; and from which it is not likely ever to be diverted.

Berenice continued to be the port of outfit for the Roman East India trade in the time of Pliny (A. D. 79), who details, in his sixth book, the account of the navigation to India; with many curious particulars relating to it: and among other matters, we may gather, that it was a complaint even in his time, that the trade to India drained Europe of its riches. Pliny says, that it cost fifty millions of sesterces every year; and yet the trade is not described as being extended to every part of India. Arbuthnot reckons a *sestertius* one-fourth part of a *denarius* of 62½ grains of silver: at this rate, the above number of sesterces will produce about 440,000l. according to the medium value of silver in the present age. The prime cost of the cargoes brought into England, from India and China, in one year, has been above three millions sterling, freight included.

From Berenice it was reckoned 30 days navigation, down the Red Sea, to *Ocelis* (Gella), just within the strait of Bab-el-mandel. Another port was *Muza* (Mocha), but Ocelis was reckoned the best, and most commodious for departure. From thence to *Muziris*, the first port of merchandise in India, was 40 days sail: so that, as they left Berenice about midsummer, they might arrive in India in the latter end of August, when the violence of the S W monsoon was abated, and the coasting navigation safe and easy.

* The Venetian trade to the east, was by the channel of the Red Sea, and Alexandria.

Pliny does not forget to mention that they departed with the *west* wind: and these 40 days sailing, would be about 15 days *run*, for an European ship, in the modern style of navigating: being about 1750 marine (the same as geographical) miles, on a straight course.

We are told that the first of these voyages were made by coasting the Arabian shore to the promontory *Syagrus* (Cape Rasalgate), and thence along the coast of Persia to the mouth of the Indus, &c. In the next age, a shorter and safer course was discovered: for from Cape Rasalgate, the ships made a direct course to *Zizerus*, a port in India; situated, as would appear by circumstances, on the northern part of the Malabar coast. After this, a direct course was made from the outlet of the Red Sea to *Muziris*, as above related. It is probable, after all, that they coasted a great part of the Arabian coast, in order to reduce the length of that part of their course that lay out of the sight of land: unleſs the habit of depending on the compaſs, has, in my idea, increased the difficulty of shaping a course without one.

Muziris is said by Pliny to have been an incommodious place of merchandise, because the shallowneſs of the port, or river's mouth, made it neceſsary to discharge or take in the cargo in small boats, at a distance from the emporium: and besides, there was danger from the pirates at *Nitria*. Another port, more commodious and better stored with merchandise, was named *Barace* (or *Becare)*, in the country of the *Niconidians*; and as the pepper of *Cottonara* was brought to this place in small boats, it may be concluded that Barace was within, or near to, the country of CANARA; which produces the best pepper in those parts, at the present day. After much study and investigation, I cannot apply to any particular spot, these ports of Muziris and Barace: for the Malabar coast abounds with ports of the above description: and it must be considered, too, that a shallow port for one of the Roman traders, which in all probability were smaller than ours, would be reckoned, in the present times, no port at all. The circumstances of the

pirate coast, and pepper country, however, confine us within certain limits: for, in the course to Muziris, the traders paſsed near the pirates' stations; and as these, by the lights which I have received from Pliny and Ptolemy, were nearly the same as the present (that is, between Bombay and Goa), I conceive the trading ports meant by Pliny, were situated between Goa and Tellicherry. The Periple of the Indian sea, and the geography of Ptolemy, throw some faint light on the subject.

Ptolemy's ideas are these: *Tyndis* (going southward) succeeds *Nitria*; then *Muziris*; *Becare* (which is one of the readings of *Barace)*; *Melcynda*, or *Nelcynda*; *Cottiara*; and then *Comaria*, or Cape Comorin; whose proper name is *Komrin*, or *Komry*. And the Periple (my information is from M. D'Anville) enumerates in the same order, *Tyndis*, *Muziris*, and *Barace*: allowing 500 stadia between each, respectively. No three places appear more convenient to this relative disposition, and to the circumstances of the pirate coast and pepper country, than Goa, Meerzaw (vulgarly, Merjee), and Barcelore, or Baſsinore. The first, namely, Goa, is just clear of the pirate coast: having Newtya, poſsibly the *Nitrias* of Pliny and Ptolemy (near which the pirates cruised on the Roman veſsels in their way to Muziris) on the north of it. The second place, Meerzaw, or Merjee, has even some affinity in sound with Muziris; and is situated on a river, and at some distance from the sea. And Barcelore, or Baſsinore, which may poſsibly be Barace, is one of the principal pepper factories at present: and therefore answers so far to Barace. Nelcynda, I take to be Nelisuram: and do not, with M. D'Anville, suppose Barace to be the port of Nelcynda, but a distinct place. It is said by Pliny, to be situated within the kingdom of *Pandion*; which is pretty well understood to be Madura: or to be comprised, at least, within the southern part of the peninsula: and therefore, the farther south we go for Nelcynda, the leſs we are likely to err. But even all this is conjecture, as far as relates to particular positions: nor is it of much

consequence: for we are clear that the ports of merchandise must be situated in or near to the country of Canara, the *Cottonara*, or pepper country of Pliny: that is, between Goa and Tellicherry; as before observed.

The ships returned from the coast of India about the month of December, with the north-east monsoon: and when entered into the Red Sea, they had a south, or south-west wind: so says Pliny. The voyage was made much within the compafs of a year: and the profits are stated to be immense: but the particulars of the cargoes are not recorded.

There are no notices in Pliny (as far as I know) concerning any voyages of the Romans to the gulf of Bengal, or to the peninsula of Malay (the golden Chersonese), although it is clear from Strabo, who wrote before Pliny, that the Ganges had then been sailed up, as high as Palibothra. Ptolemy's geography, said to be composed about 60 years after Pliny, contains evident proofs that both of the Indian peninsulas had been explored: such is the mention of the pearl fishery between Ceylon and the continent; the diamonds found on the banks of the Sumbulpour river; and the point from whence ships that traded to the Malay coast, took their departure (supposed to be Point Gordeware): besides many names that can hardly be misunderstood in the application of them; as *Arcati*, the capital of the *Soræ* (or *Sora-mandalum*, from whence corruptly *Choromandel*); *Mesolia*, the district which contains Masulipatam; the river Cauvery, under the name of *Chaboris*, &c. The peninsula beyond the Ganges is also described in Ptolemy, as far as Cochin China, or perhaps to the borders of China, or *Sinæ*. [See M. D'Anville's Antiquité Geographique de l'Inde.] We may here observe also, by the way, that the islands scattered over the gulf of Bengal, in Ptolemy, and probably meant for the Andaman and Nicobar Islands, are most of them said to be inhabited by *Anthropophagi*: and this idea has also been adopted by the modern navigators. Other islands, which may be meant either

for certain parts of Sumatra, or for some of the islands that lie extended along the western side of it, are also branded with the same character: and we find by Mr. Marsden, that it is generally believed that man-eaters exist in Sumatra even at this day. I refer the *Bonæ Fortunæ* island to the Great Andaman; and the 10 *Maniolæ*, to the northern Nicobars; being just the number of them: the 5 *Baraſsæ*, and 3 *Sindæ* islands, together with the 3 *Saba-dibæ*; are the islands I allude to, as being either parts of Sumatra, or islands near it.

SKETCHES *of the History of* HINDOOSTAN, *since the Commencement of the* MAHOMEDAN CONQUESTS.

THERE is no known history of Hindoostan (that rests on the foundation of Hindoo materials or records) extant, before the period of the Mahomedan conquests: for either the Hindoos kept no regular histories; or they were all destroyed, or secluded from common eyes by the Pundits. We may judge of their traditions, by that existing concerning Alexander's expedition: which is, that he fought a great battle with the Emperor of Hindoostan, near Delhi: and though victorious, retired to Persia, acroſs the northern mountains: so that the remarkable circumstance of his sailing down the Indus, in which he employed many months, is sunk altogether. And yet, perhaps, few events of ancient times, rest on better foundations than this part of the history of Alexander (see Section III. of the Memoir), as appears by its being so highly celebrated, not only by his cotemporaries, but by several of the most celebrated authors for some centuries following. As for the notices above referred to, in Herodotus, Pliny, and Arrian, &c.

they are rather transient views of the then state of Hindoostan, with a general account of manners and customs, than a history. Not but that these accounts are infinitely more pleasing and satisfactory, than a history would have been, if it contained nothing more than that of the Mahomedan conquests; that is, an account of battles and maſsacres; an account of the subversion of (apparently) one of the mildest and most regular governments in the world, by the vilest and most unworthy of all conquerors: for such the Mahomedans undoubtedly were, considered either in reſpect to their intolerant principles; contempt of learning, and science; habitual sloth; or their imperious treatment of women: to whose lot, in civilized societies, it chiefly falls to form the minds of the rising generation of both sexes; as far as early leſsons of virtue and morality may be supposed to influence them.

The travels of Cosmas in the 6th century, and of the two Mahomedan travellers in the 9th, afford few materials for history: and but little can be gleaned from Marco Paulo, who croſsed the peninsula, and went up the western side of it, to Guzerat, in the 13th century. Indeed, it is exceeding difficult to refer any incident related in this last author, to any particular country; as the geography of his travels is an enigma, for the most part.

It is chiefly to Persian pens that we are indebted for that portion of Indian history, which we poſseſs. The celebrated Mahomed Ferishta, early in the 17th century, compiled a history of Hindoostan, from various materials; most of which, in the idea of Col. Dow (who gave a translation of this history to the world, about 20 years ago) were collected from Persian authors. The Mahabarut, an historical poem of high antiquity, and which I understand, Mr. Wilkins is now translating from the original Sanscrit (as he has already done an episode of it, under the title of Bhagvat Geeta) is supposed to contain a large portion of interesting historical matter: but if the father of Grecian poetry made so total a change in the story of Helen, in order to give a full scope to his

imagination; what security have we that another poet may not mislead us in matters of fact; that is, in all that is valuable in history, considered as such? Mr. Dow was far from supposing that the Hindoos were destitute of genuine histories of their own country: he was not indeed acquainted with the Sanscrit language, in which they must be written, if at all: but founded his belief on the information of people on the spot. If the specimens of early Hindoo history given in the Ayin Acbaree, are akin to those which Mr. Dow had in contemplation, I confefs I can place no dependance on them. The most valuable part of Ferishta's history, he allows to be that, posterior to the first Mahomedan conquests, about the year 1000: and the following abstract of it is offered to the reader's notice, in order to fix in his mind an idea of the succefsive changes in the state of the empire of Hindoostan; which from a pure Hindoo government, became a Mahomedan one; and continued to be so, under various dynasties of monarchs, from Persia, Afghanistan, and Tartary; until the beginning of the present century: these princes, moreover, adding to the original country of Hindoostan, all the other provinces situated within the Ganges. This unwieldy state then dropping to pieces, anarchy succeeded; which, in most parts of it, is scarcely composed at present: and which had nearly given rise to a new Hindoo empire, under the Mahrattas: but the intervention of foreign powers prevented it. Lastly, one of those foreign powers seizing on the fairest provinces, and taking the lead in the empire, although removed from it, the distance of an actual route of fifteen thousand miles!*

Even after the commencement of the Mahomedan conquests, we find little more in Ferishta, save the histories of the empire of Ghizni (or Gazna) and Delhi; until the subjection of all Hindoostan, by the Patan emperors in the beginning of the 13th century: for Hindoostan continued to be divided into a number of separate

* No part of the Roman empire was distant from its capital, by the most circuitous route, more than 2800 miles.

kingdoms, each of which required a particular history: and of which we know only such parts of it, as were interwoven with the history of the conquering country. Many of these old Hindoo kingdoms, bore the same names as the present soubahs (or vice-royalties) do; and had, probably, nearly the same limits. The history of the Deccan, is yet more obscure than that of Hindoostan; being brought into view later, as the Mahomedan conquests extended thither: and which began to encroach on it about the year 1300, although the entire conquest of it, was not made until late in the 17th century.

It may be observed, that the first Mahomedan conqueror who made any establishments, that is, Mahmood, found little less difficulty in subduing the country, than the latter conquerors did; when so many kingdoms were united under the Patan emperors: for these kingdoms, now become provinces, were too extensive, and composed of materials too discordant to unite properly: not to mention, that they were never long enough united, to produce the happy effects resulting from a long period of intercourse under one common head, and which assimilates the whole into one mass, like the French or British provinces. And this must ever be the case, in very extensive empires, where a delegation of great powers, and distant situation, prepares the provinces for independency, whenever the supreme government happens to be placed in weak hands. Hence, Hindoostan, even under the Moguls, may be considered only as a collection of tributary kingdoms; each accustomed to look no farther than to its own particular viceroy; and, of course, ever in a state to rebel, when the imbecility of the emperor, and the ambition of the viceroy, formed a favourable conjuncture. To this must be attributed the little resistance that was made to the arms of Tamerlane, Baber, Humaioon, and Nadir Shah; although so many provinces were at those times united under one prince.

The first Mahomedan conquests that led to permanent establishments in Hindoostan, were those of the beforementioned Mahmood, Emperor of Ghizni: for I make a distinction between *these*, and the first *irruptions* of the Mahomedans; which left such slight traces behind them, as to be scarcely apparent. Among others, was that of the Caliph Valid in the first century of Mahomedanism. The empire of Ghizni was founded by Abistagi, governor of Korasan (A. D. 960), who revolted from the King of Bucharia: whose ancestor, in his turn, had arisen to power, on the ruins of the Caliphat empire, about 87 years before. Ghizni consisted chiefly of the tract which composed the kingdom of Bactria, after the division of Alexander's empire: that is, the countries lying between Parthia and the Indus; and south of the Oxus.* Ghizni (or Gazna) a city placed among the western sources of the Indus, and not far from the Indian Caucasus, was the reputed capital; though Balk or Balich claimed this honour, likewise.

Mahmood (commonly styled Sultan) was the third in succefsion from Abistagi: and was himself the son of Subuctagi, who appears to have meditated the conquest of the western part of India; and, like Philip, left his projects, as well as his kingdom, to his son. Subuctagi had carried his arms acrofs the Indus, and ravaged the Panjab; but made no establishments: for we find, that at the time of his son Mahmood's invasion, a prince of the Bramin race, or religion, named Jeipal, pofsefsed the whole country, along the east side of the Indus, to Cashmere; and that he had the kings of Delhi, Agimere, Canoge, and Callinger, for allies: so that it may be concluded, from the circumstance of the frontier provinces being under a Hindoo government; and from the state of the Hindoo religion, throughout the scene of Mahmood's conquests; that the Mahomedans, whatever ravages they might have committed, previous to this time, had not, as we have before observed,

* The reader is requested to consult the map in Section III. for the countries lying between the Indus and the Caspian Sea.

formed any establishment in Hindoostan: but that the whole country was perfectly HINDOO, at the time of Mahmood's conquest. It must be observed, that I do not clafs the country of Cabul, or any of the provinces on the west of the Indus, as belonging to Hindoostan proper.

Before Mahmood began his first expedition into India, which was only three years after his acceſsion, he extended his empire northward, by reducing Bucharia; from whose king, his ancestor had revolted, as has been observed above.

In A. D. 1000, he entered Hindoostan: but in the course of eight years, he made no further progreſs than Moultan. The people of Moultan, who were the *Malli*, and *Catheri* (that is, the Kuttry or Rajpoot tribe) of Alexander, must have preserved their ancient spirit, to be able to oppose, for so long a time, such formidable armies, headed by so furious an enthusiast. In 1008, we find all the Hindoo princes, from the west of the Ganges to the river Nerbudda, united against him, for the common defence of their religion; the extirpation of which, was to Mahmood, an object equal to that of the acquisition of territory, or subjects. It may be doubted whether the acquisition of subjects, the rational end of conquest, ever enters into the minds of barbarous conquerors; such as this Mahmood, Tamerlane, or Nadir Shah. One would rather suppose the contrary; or, at least, that they were totally indifferent about it, by their maſsacres and exterminations. The confederate Hindoos were defeated: and Mahmood's first eſsay towards effecting the downfall of their religion, was the destruction of the famous temple of Nagracut, in the mountains bordering on the Panjab country. His next expedition, being the sixth, was in 1011; when Tannasar, a more celebrated place of Hindoo worship, on the west of Delhi, experienced a like fate with Nagracut; and the city of Delhi itself was taken at the same time. In 1018, he took Canoge, and also destroyed the temples of Matra, or Matura (the *Methora* of Pliny), a city of high anti-

quity, and no leſs an object of religious veneration, near Agra. After this, turning his arms against the Rajpoots of Agimere, he found either them, or their country, which is full of mountains and fastneſses, too strong for him.

His twelfth expedition, in 1024, was fatal to the celebrated temple of Sumnaut, in the peninsula of Guzerat, adjoining to the town of Puttan, on the sea coast; and not far from the island of Diu, now in the hands of the Portuguese. His route was by Moultan and Agimere, the citadel of which he was compelled to leave in the hands of the enemy: and in croſsing the desert, between it and Moultan, he hazarded the loſs of his army, for want of water. The destruction of Hindoo temples, with their priests and votaries, appears to have afforded this monster the highest delight. Nothing offends our feelings more, than the progreſs of destruction urged by *religious zeal*: as it allows men to suppose themselves agents of the Divinity; thereby removing those checks which interfere with the perpetration of ordinary villainy; and thus makes conscience a party, where she was meant to be a judge. Such also was Tamerlane: but to the alleviation of the misfortunes of the Hindoos, the enthusiasm of Mahomedanism had lost its edge, before the invasion of Nadir Shah. Had this predominated in his savage nature, the whole scene of his conquests must have remained a solitary desert.

The city of Nehrwalla, the ancient capital of Guzerat, together with that whole peninsula, fell into the hands of Mahmood; who died four years afterwards (1028) poſseſsed of the eastern, and by much the largest part of Persia; as well as, nominally, of all the Indian provinces from the western part of the Ganges, to the peninsula of Guzerat; and from the Indus, to the mountains of Agimere: but the Panjab was the only part of it, that was subjected to regular government, under the Mahomedans; as being in the vicinity of the Ghiznian empire. As for the Rajpoots of Agimere, they still preserved their independence, among their rugged moun-

tains, and close vallies; and not only then, but in a great measure, down to the present time: being in respect of Hindoostan, what the country of Switzerland, is to Europe; but much more extensive, and populous. From Mahmood to Aurungzebe, the Indian conquerors were contented with the nominal subjection of those hardy tribes: among whom, military enthusiasm, grafted on religious principles, is added to strength and agility of body; and this race is disseminated over a tract equal to half the extent of France. It goes under the general name of Rajpootana: and is the original country of the founder of the Mahratta state; whose rulers, about 80 years ago, aspired at universal empire in Hindoostan.

The Ghiznian empire, subject to the same causes of decay, with other unwieldy states of rapid growth, was in 1158, forcibly divided: the western and largest part, and which still retained the ancient name of the empire, being seized on by the family of the Gaurides (so denominated from Gaur, or Ghor, a province and city, lying beyond the Indian Caucasus) while the provinces contiguous to both shores of the Indus, remained to Chusero, or Cusroe, who fixed his residence at Lahore.* And even his posterity were, in 1184, driven out of their kingdom, by the Gaurides. The Mahomedans, thus become nearer neighbours to the Hindoos, by fixing their residence at Lahore, extended, as might be expected, their empire eastward; Mahomed Gori, in 1194, perpetrating, in the city of Benares, the same scenes as Mahmood had before done at Nagracut and Sumnaut. Benares was regarded as the principal university of Braminical learning; and we may conclude that about this period, the Sanscrit language, which was before the current language of Hindoostan, began to decline in its purity, by the admixture of words from that of the conquerors; until the language of Hindoostan became what it now is: the original Sanscrit, preserved in their ancient writings, becoming a dead language. Such

* For the dates of the reigns of the emperors of Hindoostan, the reader is referred to a Chronological Table, at the end of the Introduction.

mutations have taken place in every country, where the conquerors have been numerous enough to effect it: the Saxon language was at the same period suffering from the Norman conquest, what the Sanscrit did from the Ghiznian. Mahomed Gori also carried his arms to the south of the river Jumnah, and took the fortreſs of Gwaljor; which then gave name to a kingdom, that has since composed nearly the soubah of Agra: he also reduced the eastern part of Agimere.

The death of this emperor, in 1205, occasioned a new division of the Ghiznian empire, the Persian part remaining to Eldoze, and the Indian part to Cuttub, who founded the Patan or Afghan dynasty in Hindoostan. The Afghans originally inhabited the mountainous tract lying between India and Persia, or the ancient Paropamisus. Before the elevation of Cuttub to the throne, he had carried his arms, under Mahomed Gori, into Agimere and Guzerat. Lahore was his capital, originally; but the neceſsity of fixing the imperial residence, nearer to the centre of the new conquests, occasioned him to remove to Delhi. It may be observed of the capitals of states, in general, that such as are neither emporiums of trade, nor meant as citadels in the last resort, are (as it were) attracted towards the quarter, from whence hostility is either intended, or expected.

The Emperor Altumsh, who succeeded to the Patan throne, in 1210, completed the conquest of the greatest part of Hindoostan proper. He appears to be the first Mahomedan that made a conquest of Bengal; the government of which was from this time bestowed on one of the reigning emperor's sons. It was during this reign (1221) that Gengiz Cawn, among his extensive conquests (perhaps the most so, of any conqueror in history) accomplished that of the empire of Ghizni; putting an end to the dynasty of Charasm, which then occupied that throne: and driving before him, the unfortunate Gelali, son of the reigning emperor; who swam the Indus to avoid his fury. Gengiz, however, left Hindoostan undisturbed.

About A. D. 1243, the Moguls, or Munguls, succeſsors of Gengiz, who poſseſsed, or rather over-run the countries on the north-west of Hindoostan, made several irruptions into it: and Turmeshirin Khan is reported, by Sherefeddin (the historian of Timur), to have carried his arms into the Dooab; but without making any establishment. Ferishta takes no notice of the progreſs of this desultory conqueror, but only describes the inroads of the Moguls into the Panjab; which now frequently happened: although it was not till more than 150 years afterwards, that, under Timur, or Tamerlane, they penetrated to the centre of India. Ferishta describes also an irruption of Moguls into Bengal, by way of *Chitta* and Thibet, in 1244.

I have before observed, that the provinces of Hindoostan were held rather as tributary kingdoms, than as provinces of the same empire: and that they seldom failed to revolt when a favourable opportunity offered. In 1265, Malwa regained its entire independence from the crown of Delhi; having gradually shaken off the yoke, laid on it by Cuttub in 1205: and the Rajpoots were on every occasion, notwithstanding their comparative vicinity to the capital, aſserting their independency likewise. Of the state of the internal government of Hindoostan, a judgment may be formed, by the punishment inflicted on the Mewatti, or the Banditti tribe, which inhabit the hilly tract, within 25 miles of Delhi. In 1265, 100,000 of these wretches were put to the sword: and a line of forts was constructed along the foot of their hills. Rebellions, maſsacres, and barbarous conquests, make up the history of this fair country, which, to an ordinary observer, seems destined to be the paradise of the world: the immediate effect of the mad ambition of conquering more than can be governed by one man: the whole empire being portioned out to rapacious governors, who domineering over the governed, until their spirits were sufficiently debased, were at last able to persuade them, that their common interest lay in taking up arms, to render these governors indepen-

dent: and indeed, had it brought them nearer to the point of having a regular, permanent government, this might be true; but, in fact, it only subjected them to a new conqueror; or to the punishment of rebellion from the former one. It would appear as if the warm climates, and more especially the open countries, situated within them, were destined to be the seats of despotism: for that the climate creating few wants, and the soil being productive without any great exertion; the inhabitants of it do not poſsefs those energies that, in a cooler climate, prompt mankind to investigate their natural rights, and to aſsert them. This, however, is a point that I shall not venture to decide on; although I believe it is a fact not to be disputed, that throughout the known parts of the world, despotism prevails most in the warm climates. The Patan, Mogul, and Tartarian conquerors in Hindoostan and China, however hardy at first, have, in a course of ages, sunk into the same state of effeminacy with their subjects: and, in their turn, have, with them, received a new master. Let those who are in the habit of complaining of the severity of northern climates, reflect, that whatever physical evils it may produce, it matures the great qualities of the mind; and renders its inhabitants pre-eminent among their species: while a flowery poet, or a more flowery historian, is the most eminent production of the tropical regions.

While the kings of Delhi were prosecuting their conquests in the east and south of Hindoostan, the provinces on the west of the Indus, were, of course, neglected; although not avowedly relinquished. It might have been expected, that so excellent a barrier as the upper part of the Indus, and the deserts beyond Agimere, would have induced an emperor of Hindoostan to give up, of choice, all the provinces that lay on the west of this frontier: and the neglect of so prudent a conduct, occasioned the peace of the empire to be often disturbed; and ended in their being forcibly taken away at last by the Moguls: who, not contented with their new acquisitions on the west of the Indus, croſsed that river, and

invaded the Panjab: and so formidable did they appear to Ferose II. that some tribes of them were permitted to settle in that country (A. D. 1292). The reader will not forget the similar conduct of the Roman emperor Valens, with respect to the Goths, who were permitted to crofs the Danube, and settle in Thrace: and the similitude is the more striking, in that the Hindoostan empire was afterwards conquered by the afsistance of the descendants of those Moguls. This Ferose II. was of the tribe of Chilligi or Killigi (from Killige, near the mountains of Gaur), but is, neverthelefs, included in the Patan dynasty: the name Patan, or Pitan, being applied rather in a loose manner, to all the tribes bordering on the common frontiers of India, Persia, and the province of Balk; that is to say, the ancient province of *Paropamisus*.

In 1293 this emperor gave into the scheme of attacking the DECCAN; which, at this period, must be understood to mean the country lying generally to the south of the Nerbudda and Mahanada (or Cattack) rivers: a tract nearly equal in extent to what he already pofsefsed in Hindoostan; and which extended from the shores of the Indus, to the mouth of the Ganges; and from the northern mountains, to Cattack, Sirong, and Agimere: the greatest part of Malwa, with Guzerat, and Sindi, being then independent. The riches of the King of Deogire (now Dowlatabad), one of the principalities or states of the Deccan, gave birth to this project; and the projector was Alla, governor of Gurrah, which nearly bordered on the devoted country. The covetousnefs of the emperor made him embrace a proposal, which eventually involved in it his own ruin, for Alla afterwards deposed him by means of that very plunder.

Alla's first expedition was attended with the capture of Deogire (or Deogur), and with it an incredible quantity of treasure and jewels; with which, having increased his army, he deposed and murdered the emperor. We cannot help acknowledging the justice of this punishment, when we recollect the motives on which

the expedition to the Deccan was undertaken; and that, moreover, the emperor had been bribed by Alla, with part of the plunder taken in a former predatory expedition to Bilsah.

When Alla (who was the first of the name) had poſſeſſion of the throne, in 1295, he began his plan of conquest, by the reduction of Guzerat; which, while it continued independent, was, by its local situation, a strong obstacle to his designs on the Deccan. Next, he reduced Rantampour, and Cheitore, two of the strongest holds of the Rajpoots, in Agimere. This was the first time that Cheitore had fallen to the Mahomedans. In 1303, he also reduced Warangole, the capital of Tellingana, another principality of the Deccan, and comprehending nearly the present country of Golconda. This, as well as Cheitore, was a city and fortreſs of vast extent and population. But in the midst of these conquests, and probably the effect of them, the watchful and restleſs Moguls, from the opposite quarter, penetrated even to Delhi; and plundered the suburbs of it.

In the following year, the remainder of Malwa was conquered; and in 1306, the conquest of the Deccan was resumed, under Caſoor, the general of Alla; who proceeded to the Deogur country, by the route of Baglana, which he reduced in his way; and which Ferishta * calls the country of MARHAT. Caſoor not only carried his arms into Deogur (Dowlatabad), and from thence into Tellingana, but into the Carnatic likewise, in 1310. By the Carnatic, is here meant the peninsula in general, lying on the south of the Kistna river. It is not known how far he penetrated southward, but he was directed by Alla to reduce MABER, which we understand to comprehend the southern part of the peninsula. His expedition appears to be rather predatory, than otherwise; *agreeable to the genius of his master, Alla.* The quantity of treasure

* It is to be regretted that Col. Dow did not give a literal translation of Ferishta, as a text, and add his own matter, or explanations, in the form of notes. We should then have been able to distinguish the one from the other.

amaſsed, exceeds all belief. It was said that silver was found too cumbersome for the soldiery, gold being in such plenty. The historian observes on this occasion, as well as on the taking of Deogur, that the princes of the Deccan had been for a great number of ages amaſsing this treasure: so that their country had probably continued undisturbed all that time.

In 1312 Cafoor ravaged the northern part of the Deccan again, and laid Tellingana and the Carnatic under a tribute: but the entire conquest of those countries was not effected until about three centuries afterwards, under the latter princes of the house of Timur. Alla died in 1316. At this period all Hindoostan proper was comprehended in the Patan empire (so called from the dynasty in poſsesſion of the throne): and the interior policy is said to be so well regulated, that strangers might travel throughout the empire in perfect security.

Rebellions breaking out in Tellingana in 1322, and 1326, it was again subjected: and the whole Carnatic ravaged from sea to sea. But under a succeeding emperor, Mahomed III. the princes of the Deccan aſsumed courage, and headed by Belaldeo, King of the Carnatic, they drove the Mahomedans entirely out of those countries; nothing remaining to them, save the fortreſs of Dowlatabad (or Deogur). About the same time (1344) the city of Bijinagur, corruptly called Bisnagar, was founded by the same Belaldeo. Mahomed, who appears to have been a weak prince, lost much territory also, by rebellions, in Bengal, Guzerat, and the Panjab: mean while, he was occupied in attempting the conquest of China, but was repulsed on the frontier. It is probable, from circumstances, that he went by way of Aſsam. This emperor also planned the absurd scheme of transferring the seat of government from Delhi to Dowlatabad: and attempted it twice, but without succeſs.

Ferose III. who succeeded in 1351, appeared more desirous of improving the remains of the empire, after the defection of Bengal

and the Deccan, &c. than of extending it, by arms. Canals, and public works, for the improvement of agriculture, and of the inland navigation, were his favourite objects, during a reign of 37 years. (See the Memoir, Section III.) The Moguls made another irruption in 1357, and the time now approached, when a more serious one was to take place under Timur, or Tamerlane. After the death of Ferose, in 1388, rebellion and civil war, during a course of several years, prepared the empire for foreign subjection: and a minority, in the person of Mahmood III. who succeeded in 1393, brought matters to a crisis. During the confusions attendant on the state of a minority, in an empire which could with difficulty be held together by a veteran despot, the historian remarks an unusual circumstance: two emperors in arms against each other, residing within the same capital. In this state of things, Timur, who had already extended his empire over all the western Asia and Tartary, turned his arms towards Hindoostan in 1398. In the preceding year, he had sent his grandson Peer Mahomed, to reduce the Panjab, and Moultan; and in October, crofsed the Indus himself; and joining his grandson near Moultan, his army proceeded in different divisions to Delhi, which submitted, without what may be properly termed, a battle. This inhuman monster, who had credit enough with a poet of the present century, to be brought on the stage, as a hero, pofsefsing great and amiable qualities, obtained in Hindoostan the title of "the destroying Prince:" and was truly worthy of it, from the numerous mafsacres and exterminations executed under his immediate direction. Timur staid in Delhi only 15 days: and then appears to have been on his return to the seat of his empire, when, hearing of a fortrefs in the Dooab, that had resisted the arms of a former Mogul invader (Turmecherin Khan), he marched towards it and took it. From thence he proceeded to the place where the Ganges iſsues out of the mountains, and where the Hindoos resort at certain seasons, in vast numbers, to pay their adorations to, and to purify themselves in that

sacred stream. His object was the extermination of these inoffensive people; and he partly succeeded. From this place, turning to the north-west, along the foot of Mount Sewalick, he continued his maſsacres, though not without oppoſition, until he arrived on the frontiers of Cashmere. He spent little more than five months between the time of his croſsing and recroſsing the Indus: and appears to have paid more attention to seasons than Alexander did: as Timur chose the fair season for his expedition, whereas Alexander was in the field, in the Panjab, during a whole rainy season (see Memoir, Sect. III.). Timur, however, may be said rather to over-run, than to subject, or conquer; for he did not disturb the order of succeſsion in Hindoostan, but left Mahmood on the throne: reserving to himself the poſseſsion of the Panjab country only; and this his succeſsors did not retain long. His views were at this time directed towards the Turkish empire; and this made him neglect India, which did not promise so plentiful an harvest of glory as the other. During his life, which ended in 1405, he was prayed for in the mosques of Hindoostan, and the coin was struck in his name: but this might be more the effect of policy in the usurpers of Mahmood's throne, than the act of Timur. It does not appear from Ferishta, any more than from Sherefeddin, that this prince carried much treasure out of Hindoostan with him. But Nadir Shah's acquisition of the precious metals, at a later period, was great, beyond all ideas of accumulation in Europe: and is only to be accounted for by the influx of those metals from America, during that interval.

For the geography of Timur's marches, the reader is referred to the third section of the Memoir; and to the map.

If Hindoostan was in confusion before this invasion, it may be expected that on Timur's departure, matters became much worse. The death of Mahmood happened in 1413; and with him ended the Patan dynasty, founded by Cuttub in 1205. The throne was then filled by Chizer, a Seid (that is, one of the race of the prophet

phet Mahomed), whose posterity continued in it until 1450: when Belloli, an Afghan of the tribe of Lodi, took poſſeſſion of it, on the abdication of Alla II. under whom all Hindoostan fell into separate governments; and a potentate, styled King of the EAST, whose residence was at Jionpour, in the province of Allahabad, became the most formidable among them; while the King of Delhi had but the shadow of authority remaining to him. The son of Belloli recovered a considerable part of the empire; and in 1501, made Agra the royal residence. It was during this reign, that the Portuguese first accomplished the paſsage to India, by the Cape of Good Hope: but as their connexions were entirely with the maritime parts of the Deccan, which were independent of Delhi, no notice of this event is taken by Ferishta, in his history of Hindoostan. The empire fell again into utter confusion, under Ibrahim II. in 1516; and this paved the way for the conquest of Hindoostan by Sultan Baber, a descendant of Tamerlane and of Gengiz Kan; who reigned over a kingdom composed generally of the provinces situated between the Indus and Samarcand. Being diſpoſſeſsed of the northern parts of his dominions, by the Usbecs, he determined to try his fortune in Hindoostan, whose distracted situation flattered his hopes of conquest. His residence at this time was at Cabul, from whence he undertook his first expedition acroſs the Indus, in 1518. After this, he made four others: and in the fifth (A. D. 1525), he defeated the Emperor of Delhi, and put an end to the dynasty of Lodi. It is said that Baber croſsed the Indus, this last time, with only 10,000 chosen horse; the enemy's generals, by their revolts, furnishing him with the rest of his army. In this, we have a fresh instance of the small dependence that the Hindoostan emperors could have on their viceroys and generals. Baber reigned only five years in Hindoostan; during which, his chief employment was the reduction of the eastern provinces. Nor did he relinquish his Persian provinces, by croſsing the Indus. His son, Humaioon, succeeded him in 1530; but

the short reign of Baber, did not allow time enough to compose the distractions that had so long prevailed; or to exterminate the seeds of rebellion: for the intrigues of his brothers, and the open rebellion of Sheer Kan, drove Humaioon, although a prince of considerable abilities, and great virtues, from his empire, in 1541. His flight towards the Indus, and his sojourn among the Rajpoot princes of Agimere, furnish a striking picture of royal distrefs. During his stay there, his son Acbar was born, whom we may reckon among the greatest of the sovereigns of Hindoostan. The provinces on the west of the Indus were held by a brother of Humaioon. The usurper Sheer did not long survive his new dignity; being killed at the siege of Cheitore in 1545: and was buried at Saseram in Bahar, his original estate, in a magnificent mausoleum, which he had ordered to be constructed during his life time; and of which a drawing has lately been exhibited in this country, by Mr. Hodges. Sheer Kan was of Afghan origin; and held the soubahship of Bahar, when he rebelled: and at his death, his empire extended from the Indus to Bengal. He left his throne to his son Selim, but so very unsettled was the state of Hindoostan, that no lefs than five sovereigns appeared on its throne, in the course of 9 years. In effect, there could not exist in the minds of the people, any idea of regular government, or regular succefsion: for there had scarcely ever been 12 years together, during the last, or the present century, without furnishing some example of succefsful rebellion. This induced a strong party in Hindoostan, to invite Humaioon back; and accordingly, in 1554, he returned, and met with but little resistance: but died in consequence of an accident, the following year. He was celebrated for the mildnefs and benevolence of his nature: and his return, notwithstanding the shortnefs of his reign, was a public blefsing; as it was the means of seating his son Acbar quietly on the throne. When he was driven from his empire by Sheer, he resided with Shah Tamasp, of Persia, who aided him in the recovery of it: and in the early

part of his exile, he recovered poſſeſſion of the provinces beyond the Indus.

Acbar was about 14 when his father died, in 1555. The reign of this prince has been celebrated by the pen of the famous Abul Fazil, in a book called the Acbar-namma, or history of Acbar. The buſineſs of this ſketch, being rather to give a ſort of chronological table of events, than to aim at a circumſtantial hiſtory, I ſhall not attempt to particularize the great events of this long and buſy reign of 51 years: but refer the reader to the hiſtory of Hindooſtan, by Col. Dow: in which, not only a full account of Acbar, but alſo of his deſcendants, down to Aurungzebe, will be found. As in the perſon of Baber, the line of Tamerlane firſt mounted the throne of Hindooſtan; ſo in that of Acbar, the grandſon of Baber, it may be ſaid to be eſtabliſhed. The conqueſt of their anceſtor, about a century and a half before, had no ſhare in effecting the preſent ſettlement. Baber, was in reality the founder of the Mogul dynaſty; and from this event, Hindooſtan came to be called the MOGUL empire.*

The firſt years of Acbar's reign were employed in the reduction of the revolted provinces, from Agimere to Bengal; in which the great Byram, who had a ſhare in recovering the empire for Humaioon, was a principal actor. Theſe conqueſts were ſecured in a manner very different from thoſe, achieved by former emperors; that is, by a proper choice of governors; by wiſe regulations; by an unlimited toleration in religious matters; and by a proper attention to the propenſities of the people: to all which, a long and vigorous reign was peculiarly favourable. The Hindoos ſtill formed the bulk of the people; even in thoſe provinces, that, from their vicinity to the country of the conquerors, had been the moſt

* Properly ſpeaking, the MOGUL EMPIRE was that, over which Tamerlane and his immediate ſucceſſors reigned; and in which, India was not included. Cuſtom, however, has tranſferred the name to the empire held by the deſcendants of Tamerlane, in Hindooſtan and the Deccan.

frequently over-run: and experience had taught the Mahomedan conquerors, that the paſsive religion and temper of the Hindoos, would, if left to themselves, never disturb the established government. But the DECCAN was a stumbling block to the Mogul emperors. In 1585, Acbar resolved on the attack of it, and soon after carried the war into Berar, while another army was reducing Cashmere, in an opposite corner of the empire. The Deccan appears at this time, to have been divided into the kingdoms or states of Candeish, Amednagur (or Dowlatabad) Golconda or (Bagnagur) and Visiapour. Berar and the Carnatic, each of which included several distinct governments, are not specified by the historian, as members of the Deccan: by which it would appear that they do not, in strictneſs, appertain to it. In the popular language of the times, there were reckoned to be four principalities in the Deccan: that is to say, the four first mentioned, above. Most, if not all of these, were at this time governed by Mahomedan princes; although we are not in poſseſsion of any history of the conquests or revolutions, that transferred them from the Hindoos to the Mahomedans. At the time of Acbar's death, in 1605, no farther progreſs was made in the reduction of the Deccan, and the adjoining countries, than the taking poſseſsion of the western part of Berar, Candeish, Tellingana (a division of Golconda) and the northern part of Amednagur; the capital of which, bearing the same name, was taken in 1601, after a long and bloody siege, and an unsucceſsful attempt to relieve it, by the confederate princes of the Deccan.

Acbar was the glory of the house of Timur. Hindoostan proper, had never, at any period since the first Mahomedan conquest, experienced so much tranquillity, as during the latter part of his reign: but this tranquillity would hardly be deemed such, in any other quarter of the world; and must therefore be understood to mean a state, short of actual rebellion, or at least, commotion. Prince Danial, his eldest son, died just before him; and Selim,

the next, in right of primogeniture, succeeded under the title of Jehanguire.

Jehanguire reigned about 22 years. Under him, the conquest of the Deccan was not lost sight of, though but faintly pursued. War was made on the Rajpoots, and the Rana, or chief prince, brought to terms. The rebellions of the emperor's son, Shah Jehan, embittered the latter part of his reign; and the influence of his mistrefs, Noor Jean, rendered his councils weak, and constrained his government. However, the provinces having been held together for near 70 years, the empire had acquired a degree of consolidation; and was not so liable to be shaken, as it would have been at some former periods, under the operation of similar events. It was in this reign, and in the year 1615, that Sir Thomas Roe was sent as the first English ambaſsador to the Emperor of Hindoostan. The Portuguese had by this time acquired considerable settlements in Bengal and Guzerat; but only those in Guzerat, where they also poſseſsed some extent of territory, attracted the notice of the court: and it is curious to observe what the author of the Ayin Acbaree says of them, about the year 1560. Speaking of the lands of Guzerat, he says, "By the *neglect* of the king's governors, several of these districts are in the hands of Europeans." Ferishta, also, speaking of the site of an ancient Hindoo temple, near Diu, says that it was situated in the districts that were subject to the "Idolaters of Europe."

Shah Jehan succeeded his father in 1628. The conquest of the Deccan was pursued with more vigour in this reign: and the plunders and devastations perpetrated there, occasioned most, or all of its princes to make submiſsion, and acknowledge the emperor, lord paramount. Golconda was in part, actually taken poſseſsion of: but Visiapour and the Carnatic, together with the regions of the Gauts, remained in the hands of their ancient poſseſsors.

Candahar, a fortreſs situated on the common boundary of Persia, and of the Mogul provinces beyond the Indus, was, at this time,

a subject of contention between the two monarchs of Persia and Hindoostan. The first serious quarrel between the Europeans (Portuguese) and Moguls, happened during this reign, 1633; when the Portuguese were expelled from Hoogly, in the Ganges. In 1658, the civil wars commenced between the emperor and his sons; as well as between the sons themselves: which ended in the elevation of Aurungzebe (the third in descent), after he had deposed his father, and murdered or expelled his brethren. The account of these transactions may be seen at large in Bernier and Dow; and is a very curious piece of history. In 1660, Aurungzebe (who took the name or title of Allumgire, and was the first of that name) was in peaceable posfesion of the throne: and from that period, until the year 1678, there prevailed, throughout Hindoostan in general, the most profound peace that had ever, perhaps, been known: but the remainder of the Deccan was still a *desideratum*; and Aurungzebe disdained to have any other boundary on the south, than the ocean. Accordingly, the conquest of the remote part of the Deccan employed a very considerable part of his leisure during the latter part of his reign: when the whole of that region, together with the peninsula, a few mountainous and inaccefsible tracts only excepted, were either entirely subjected, or rendered tributary to the throne of Delhi. What might appear to Aurungzebe to render this step of subduing the Deccan necefsary, was the determined spirit and growing power of Sevajee, the founder of the Mahratta state; who, by his conquests in Visiapour, appeared almost in the character of a rival to Aurungzebe.

A rebellion of the Patans beyond the Indus, in 1678, called for the presence of Aurungzebe there; which was no sooner quelled, than his persecution of the Hindoos stirred up the Rajpoot tribes in Agimere. He undertook this war also in person: but was hemmed in, with his whole army, between the mountains, and the empref herself was taken prisoner: she was afterwards, however,

permitted to escape, as well as the emperor. This did not discourage him from carrying the war into the Rajpoot country again, in 1681: when he took and destroyed Cheitore, the famous capital of the Rana; as well as all the objects of Hindoo worship found there. The spirits of these gallant people were, however, still unsubdued; and Aurungzebe was neceſsitated to grant them a peace.*

Sevajee died in 1680, and left his rising state of Mahrattas to his son Sambajee; who was afterwards betrayed into the hands of Aurungzebe, and barbarously put to death. Still, however, the mountainous parts of Baglana were unsubdued; and although the kingdom of Visiapour was reduced in 1686, and Golconda in the following year, yet he found great difficulty in prosecuting his conquests on the west; as appears by his camp being fixed on the Kistna river, about 200 miles to the north-eastward of Goa, in 1695: I say, appears; for we have at present no regular history of any later period than the 10th year of Aurungzebe; that is, to the year 1670, when Mr. Dow's history finishes: all the events that are subsequent to this date, are from other authorities.

It is said that Aurungzebe was employed in the Deccan from the year 1678, to the time of his death, and was actually in the field during the greatest part of the last 15 years of his life. This dereliction of his original empire and capital for nearly 30 years, occasioned various disorders in them, and laid the foundation of many more: among others, the second rebellion of the Rajpoots in Agimere; that of the Patans towards the Indus; and of the Jats, or Jates, in the province of Agra. This was the first time that the Jats appeared otherwise than as banditti; since which, they

* The reader may find in the 49th note to Mr. Orme's Historical Fragments of the Mogul Empire, a letter written by Jeswont Sing, Rajah of Joudypour, to Aurungzebe, expostulating with him on the unjust measures he was pursuing, with respect to the Hindoos. This letter breathes the most perfect spirit of philanthropy, and of toleration in matters of religion: together with the most determined resolution to oppose the meditated attack on the civil and religious rights of the Hindoos. The elegant translation of this letter was made by Sir Charles Boughton Rouse.

grew up to be a considerable state: and at one time were of some consideration in the politics of upper Hindoostan.

Aurungzebe died in 1707, in the 90th year of his age, at Amednagur, in the Deccan; which he had fixed on for his residence when in winter quarters. Under his reign the empire attained its full measure of extent. His authority reached from the 10th to the 35th degree of latitude; and nearly as much in longitude: and his revenue exceeded 32 millions of pounds sterling, in a country where the products of the earth are about four times as cheap as in England. But so weighty a sceptre could only be wielded by a hand like Aurungzebe's: and we accordingly find, that in a course of 50 years after his death, a succefsion of weak princes and wicked ministers, reduced this astonishing empire to nothing.

Aurungzebe obviously foresaw the contests that would arise between his sons for the empire; and it has therefore been afserted, that he made a partition of it among them. This account, however, is not warranted by the memoirs of a nobleman of Aurungzebe's court, lately published in this country,* nor by the best living authorities that I have been able to consult. Two letters, written by Aurungzebe to two of his sons, a few days before his death, indicate no intention of dividing the empire; but expreſs in doubtful terms, his apprehensions of a civil war.† He left behind him four sons: Mauzum, afterwards emperor, under the title of

* Memoirs of Eradut Khan, translated from the Persian by Capt. J. Scott, 1786. This valuable fragment of Mogul history, contains an account of the revolutions that happened in the Mogul empire, from the death of Aurungzebe in 1707, to the accefsion of Feroksere, in 1712. It contains much curious matter; and fully developes the political character of a Mogul courtier.

† These letters are preserved in one of the notes to the above work (page 8), and furnish this striking lefson to frail mortality; that, however men may forget themselves, during the tide of prosperity, a day of RECOLLECTION will inevitably come, sooner or later. Here we are presented with the dying confefsion of an aged monarch, who made his way to the throne by the murder of his brethren, and the imprisonment of his father: and who, after being in peaceable posfesfion of it, persecuted the most inoffensive part of his subjects, either through bigotry or hypocrisy. Here we behold him in the act of resigning THAT, to obtain posfession of which he incurred his guilt; and presented to us a mere sinful man, trembling on the verge of eternity; equally deploring the past, and dreading the future. How awful must his situation appear to him, when he says, "*Wherever I look, I see nothing but the* DIVINITY."

Bahader Shah ; Azem, and Kaum Buksh, who severally contested the empire with their elder brother ; and Acbar, who 30 years before had been engaged in rebellion and fled to Persia. The death of their father, was the signal of hostility between Mauzum and Azem ; the former approached from Cabul, and the latter from the Deccan, and disputed the poſſeſſion of the whole empire (for Azem had proposed a partition of it) with armies of about 300,000 men each. Near Agra it was decided by a battle, and the death of Azem ; and Mauzum took the title of Bahader Shah. His title, before his acceſſion, was Shah Aulum ; by which name he is conſtantly mentioned in the Memoirs of Eradut Khan.

Bahader Shah reigned about five years, and was a prince of conſiderable ability, and great attention to buſineſs : but the convulſions with which his elevation had been attended (notwithſtanding his pretenſions, as eldeſt ſon of the late emperor), added to the various diſorders that had taken root during Aurungzebe's long abſence in the Deccan, had reduced the government to ſuch a ſtate of weakneſs, as required not only the exertion of the beſt talents, but alſo much time, to reſtore. The rebellion of his brother Kaum Buksh, ſoon after his acceſſion, called him into the Deccan ; and this being quelled by the death of Kaum Buksh, and the total diſperſion of his followers, he wiſely quitted this ſcene of his father's miſtaken ambition ; although the Deccan was far from being in a ſettled ſtate. He had in contemplation to reduce the Rajpoot princes of Agimere, who had formed a very ſtrong confederacy, to which the long abſence of Aurungzebe had been too favourable ; and they appeared to act with much confidence and ſecurity. However, an evil of a more preſſing nature drew the emperor's attention to another quarter. The Seiks, a new ſect of religioniſts appeared in arms in the Lahore province ; and ravaged the whole country from thence to the banks of the Jumnah river. The Seiks had ſilently eſtabliſhed themſelves along the foot of the eaſtern mountains, during the reign of Shah Jehan. They differ from

most religionists, in that, like the Hindoos, they are perfectly tolerant in matters of faith; and require only a conformity in certain signs and ceremonies: but unlike the Hindoos, they admit proselytes; although those from among the Mahomedans are the least esteemed. They are now become one of the most potent states in Hindoostan. These, the emperor marched against in person, and after much trouble and delay reduced them; but their chief escaped. The emperor then took up his residence at Lahore, and seems to have continued there a very long time: probably, to check the remnant of the party of the Seiks; and to settle the affairs of the province, in general. Here he died, after a short illness, in 1712: and, it would appear, that he never had an opportunity of visiting Agra, or Delhi, during his reign.

He also left four sons: among whom a war, for the succession, commenced on the spot. The second son, Azem Ooshawn, took possession of the treasures; but was opposed by his three brothers, who agreed to divide the empire among them. A battle, in which Azem was killed, decided matters in their favour; chiefly by the address and bravery of the youngest, Jehaun Shah; who seemed resolved to abide by the agreement, to divide the empire; and as a proof of his intention, directed the treasures to be divided. But Zoolfecar Khan, an Omrah in high trust, intrigued to prevent it; intending to raise to the throne, Jehaunder Shah, who was the best fitted for his purposes. A second battle was fatal to Jehaun Shah; and left his two remaining brothers to dispute the empire by a third battle; which left Jehaunder, who was originally the eldest, in possession. He did not long enjoy his dignity; for at the end of nine months, he was dethroned by Feroksere (or Furrocksere), son of the deceased Azem Ooshawn; and of course, great grandson of Aurungzebe. The weakness and meanness of Jehaunder, is almost without parallel, in the annals of kings:* and gave occasion to

* His history is given in the abovementioned Memoirs.

the Syeds (or Seids) Houfsein Ali Khan, and Abdoolla Khan, two brothers, and Omrahs of great power, to set up Feroksere. Having been poſsefsed of governments in the eastern provinces, their influence enabled them to collect an army, with which they defeated that of Jehaunder, near Agra, in the same year, 1712.

The Seiks appeared again in arms, during the following year: and in 1716, they were grown so formidable, that it appeared neceſsary to march the grand army against them, with the emperor at its head; but we are ignorant of the particulars of the campaign.

It was in this reign that the English East-India Company obtained the famous FIRMAN, or grant, by which their goods of export and import were exempted from duties, or customs; and this was regarded as the Company's COMMERCIAL CHARTER in INDIA, while they stood in need of protection, from the princes of the country.

In the year 1717, Feroksere was deposed, and blinded by the Seids: who raised to the throne Ruffieh-ul-Dirjat, a son of Bahader Shah. Both this emperor and his brother, Ruffieh-al-Dowlat, were, in the course of a year, raised to the throne; and afterwards deposed and put to death by the Seids; who had now the disposal of the empire and all its concerns. Thus, in 11 years from the death of Aurungzebe, five princes of his line, who had mounted the throne, and six others who had been competitors for it, had been disposed of: and the degraded state of the regal authority, during this period, had introduced an incurable anarchy, and a disposition in all the governors of provinces, to shake off their dependency on the head of the empire. From this time, affairs declined very rapidly: and the empire, which had acquired some degree of consistency under the house of Timur, was now about to be dismembered, in a degree beyond what it had experienced, even before the æra of the Mahomedan conquests.

Mahomed Shah, grandson of Bahader Shah, was placed on the throne by the Seids, in 1718. This prince, warned by the fate of

his predeceſsors, and having very early in his reign acquired power ſufficient for the purpose, got rid of the Seids: but not without a rebellion and a battle.

Nizam-al-Muluck, Viceroy of the Deccan, had for some time been rising into power; and the times being favourable, he meditated independency. He had received some affronts from the Seids, which furniſhed him with an excuse for withdrawing to his government: from whence, in 1722, he was invited to court, and offered the post of vizier. This offer, however, he declined, as not suiting his projects: which had for their object, sovereignty, instead of ministry; in the Deccan, at least. The Mahrattas too, whose power had progreſsively increased, and who even held their ground against so martial and persevering a prince as Aurungzebe, were, as might be expected under a succeſsion of weak ones, grown truly formidable to the rest of the empire: and their vicinity to the Nizam, afforded him a complete pretence for increasing his army. When the princes of the house of Timur were so eagerly pursuing the conquest of the Deccan, it seems to have escaped their penetration, that this religion, which poſseſsed ample resources within itself, and innumerable local advantages in point of security from an enemy without, was also situated at such a distance from the capital, as to hold out to its viceroy the temptation of independence, whenever a favourable opportunity might offer. Perhaps, if the Deccan had been originally left to itself, the posterity of Timur might still have swayed the sceptre of Hindoostan.

While the Nizam continued so formidable in the south, the Mahrattas directed their attacks against the middle and northern provinces. Malwa and the open parts of Agimere were over-run by them: and their detachments insulted even the capital of the empire. The weak Mahomed had in the early part of his reign endeavoured to satisfy their demands, by paying them a tribute amounting to one-fourth of the net revenue of the invaded provinces: but this, as might have been expected, only increased

their insolence, and ended in their seizing on the provinces themselves.

In 1738, the Nizam, confident of his interest with a powerful faction at court, came thither, attended by a large body of armed followers. Dowran, the commander in chief of the army of the empire, was at the head of the court party; which the Nizam finding too strong, to be easily dispofsefsed of their places, he invited Nadir Shah, the usurper of the Persian throne, and who was then engaged in the siege of Candahar, to invade Hindoostan: hoping that he and his faction might get rid of Dowran; or at any rate, that they might profit by the confusion it would occasion. Many thought that the Nizam's views extended to the empire itself. Accordingly, in the following year, Nadir Shah entered Hindoostan, and advanced to the plains of Carnawl, where Dowran had afsembled the army, but was soon after killed in a skirmish. So uncertain was the state of things even at this time, that Nadir Shah offered to evacuate the empire for fifty lacks of rupees (half a million). But the intrigues of the Nizam and his party, occasioned the weak emperor to throw himself on the clemency of the invader; who entered Delhi, and demanded 30 millions sterling, by way of ransom. Tumults, mafsacres, and famine, were the result: 100,000 of the inhabitants were mafsacred, and 62 millions of plunder were said to be collected. Nadir married his son to a granddaughter of Aurungzebe, restored Mahomed Shah to his throne, and returned to Persia, after obtaining the cefsion of all the countries subject to Hindoostan, lying on the west of the Indus.

His departure left the Nizam in pofsefsion of the whole remaining power of the empire: and which he sacrificed to his own views in the Deccan, where he established an independent kingdom for himself. The Mahratta invasions of the Carnatic in 1740 and 1741, and particularly the defeat and death of Doast Ally (Nabob of Arcot) by their arms, called the Nizam home; after delegating his power at court to his eldest son Gazi o'dien.

The Nizam, on his arrival, settled the Carnatic for the present, by placing Anwar o'dien, father of the present Mahomed Ally, in the government, or nabobship of Arcot; which was then understood to comprehend nearly the present Carnatic.

Bengal became independent of Delhi a little before this time (1738), under Aliverdy Cawn; and not long after, a vast army of Mahrattas, both from Poonah and Berar (for they were now divided into two states) invaded it, under the sanction of the emperor's name, who being at a loſs to satisfy their repeated demands, sent them to collect for themselves the arrears of revenue since the defection of Aliverdy. About the same time the Rohillas, a tribe from the mountains that lie between India and Persia, erected an independent state on the east of the Ganges, and within 80 miles of Delhi. Very strong symptoms of the universal diſsolution of the empire appeared at this time.

Nadir Shah died in 1747: and in the confusion that followed, Abdalla, one of his generals, seized on the eastern part of Persia, and on the bordering provinces of India, that were ceded by Mahomed Shah to Nadir, and these he formed into a kingdom, known at present by that of Candahar; or more familiarly by that of the *Abdalli*. It comprizes nearly the ancient empire of Ghizni.

Mahomed Shah died the same year, having reigned 29 years: a long period, considering the fate of his immediate predeceſsors, and the state of anarchy that prevailed so universally in Hindoostan.

Ahmed Shah, son of Mahomed, succeeded his father. In his reign, which lasted about 6 years, the entire division of the remainder of the empire took place: nothing remaining to the house of Timur, save a small territory round Delhi, together with the city itself (now no longer a capital), exposed to repeated depredations, maſsacres, and famines, by the contests of invaders. The last army that might be reckoned *imperial*, was defeated by the Rohillas, in 1749; by which their independency was firmly established in the

eastern part of the province of Delhi. The Jates, or Jats, a Hindoo tribe under Soorage-Mull, established themselves, and founded a state in the province of Agra. The Deccan and Bengal we have already seen usurped by their viceroys, the Nizam and Aliverdy: Oude was seized on by Seifdar Jung (father to the late Sujah Dowlah, and grandfather to the reigning Nabob of Oude, Azuph Dowlah): Allahabad by Mahomed Kooli: Malwa was divided between the Poonah Mahrattas, and several native princes, and zemindars: Agimere reverted of course, to its ancient lords, the Rajpoot princes: and the Mahrattas, who had of late been making large strides towards universal plunder, if not to universal empire, poſſeſſed, in addition to their share of Malwa, the greatest part of Guzerat, Berar, and Oriſsa; besides their ancient domains in the Deccan: and were alternately courted and employed by different parties, and were become the Swiſs of India; with this deviation from the custom of the European Swiſs, that they usually paid themselves, instead of being paid by their employers. Abdalla, as has just been said, having established his new kingdom very early in this reign, entered Lahore and Moultan (or the Panjab) with a view to the conquest of them. The whole country of Hindoostan proper, was in commotion from one extreme to the other: each party fearing the machinations or attacks of the other; so that all regular government was at an end, and villainy was practised in every form. Perhaps, in the annals of the world, it has seldom happened that the bonds of government were so suddenly diſsolved, over a portion of country, containing at least 60 millions of inhabitants.

The Nizam died at a very advanced age,* in 1748, and was succeeded by his son Nazirjung, in prejudice to the rights of his eldest son, Gazi, vizier to the nominal emperor. The contests that followed soon after, between Nazirjung and his nephew

* He was 104 years old. He left five sons; Gazi o'dien, Nazirjung, Salabidjung, Nizamally (the present soubah of the Deccan, and the only survivor) and Bazalet Jung.

Muzzuffer Jung, for the throne of the Deccan; and between the families of Anwar o'dien and Chunda Saheb, for the nabobship of Arcot, one of its provinces, occasioned the French and English to engage as auxiliaries in the wars that happened in consequence of them. In the first, the French alone interfered: in the latter, both nations; the English espousing the cause of the family of Anwar o'dien. These wars lasted till the year 1754; and ended, after much bloodshed by battle and afsafsination, in fixing Mahomed Ally, second son of Anwar o'dien, in the government of Arcot; and Salabidjung, son of the late Nizam-al-Muluck, in the soubahship of the Deccan: the original disputants being either afsafsinated or killed in battle. By this result, the English gained the point of establishing their security and their influence in the Carnatic: and the French, in addition to the solid advantage of getting pofsefsion of the northern circars,* valued at half a million sterling of annual revenue, gained the splendid but uncertain privilege of influencing the councils of the Nizam, by attending his person with their army, commanded by the celebrated M. Bufsy.

The Mogul empire was now become merely nominal: and the emperors must in future be regarded as of no political consequence, otherwise than as their names and persons were made use of, by different parties, to forward their own views. That the name and person of the emperor were of use, as retaining a considerable degree of veneration among the bulk of the people in Hindoostan and the Deccan, is evident, from the application made at different times for grants of territory, forcibly acquired by the grantee, but which required the sanction of the lord paramount, in order to reconcile the transaction to the popular, or perhaps, vulgar opinion. Thus every usurper has endeavoured to sanctify his usurpation, by either a real or pretended grant from the emperor: and others,

* The geographical position of the circars, and the origin of the application of the term *northern*, to them, will be found in the latter part of this Introduction.

by obtaining poſſeſſion of his person, have endeavoured to make their acts paſs for his. Another remarkable instance of the effect of popular opinion, *is*, that the coin throughout the whole tract, known by the name of the Mogul Empire, *is* to this day, struck in the name of the nominal emperor.

In 1753, the Emperor Ahmed was deposed by Gazi,* after having reigned about 6 years. In the preceding year, the Mahrattas had been called in, to aſsist in reducing the Jats, who were in poſſeſsion of Agra, and become troublesome neighbours to the emperor: and in the present year, the Berar Mahrattas established themselves in Oriſsa, by ceſsion from Aliverdy, Nabob of Bengal: who was also compelled, for a short time, to pay them a tribute for Bengal and Bahar: amounting to one-fourth of the clear revenue. This, together with the Mogul's former permiſsion to collect the arrears of revenue due to him, is the foundation of their claims on Bengal and Bahar; and which they have never relinquished, although the times may have been unfavourable to their aſserting them.

Allumguire II. grandson of Bahader Shah, was placed on the nominal throne by Gazi, with the concurrence of Nidjib Dowlah, a Rohilla chief, and commander of the army. Abdalla of Candahar, was at this time in poſſeſsion of Lahore, and threatened Delhi. In 1756, the emperor, to get rid of Gazi, invited Abdalla to Delhi; who accordingly came, and laid that unfortunate city under heavy contributions; not even sparing the sepulchres of the dead: but being baffled in his attempt on Agra (held by the Jats) he proceeded no farther eastward, but returned towards Persia, in 1758. The emperor and his family were now reduced to the lowest poſsible state of royalty: alternately soliciting the aſsistance

* It is neceſsary to observe, that the Gazi o'dien in question, is not the person whom we have seen before, in the capacity of vizier to Mahomed Shah; but his son. But this is the Gazi, who is so famous, or rather infamous, for aſsaſsinations and crimes of almost every other kind. The elder Gazi perished in an attempt to recover the poſseſsion of the Deccan from his younger brother Salabidjung, in 1752.

of Abdalla, and of the Mahrattas; and as much in dread of their allies, as of their enemies.

In 1760, Allumguire was deposed and murdered by Gazi. His son, the present emperor, who took the title of Shah Aulum, was then engaged in a fruitleſs attempt to reduce the Bengal provinces. He had succeſsively thrown himself, on the Mahrattas, Nidjib Dowlah, and Sujah Dowlah, for protection and aſsistance; but without succeſs. Mahomed Kooli of Allahabad, however, received him: and it was by means of an army furnished by that chief, and by Bulwantsing, zemindar of Benares, that he was enabled to enter the Bengal provinces, where he was joined by some refractory zemindars of Bahar, and made up altogether a force of about 60,000 men: but notwithstanding his numbers, they were so ill provided, that he ended his expedition (in 1761) by surrendering himself to the British, who had taken the field as allies to the Nabob of Bengal: and who, having at that time no inducement to connect their fortunes with his, he applied with more succeſs to Sujah Dowlah, who, in Mahomed Kooli's absence, had seized on Allahabad.

Abdalla had visited Hindoostan no leſs than 6 times during the late reign; and appeared to have much more influence in the empire than Allumguire had. His sixth visit, was in 1759 and 1760; when Delhi was again plundered and almost depopulated, although during the time of Aurungzebe it was supposed to contain two millions of souls.

The Mahrattas in the midst of these confusions and revolutions, daily gathered strength. We find them engaged in every scene of politics and warfare from Guzerat to Bengal; and from Lahore to the Carnatic. Poſseſsed of such extensive domains and vast armies, they thought of nothing leſs than driving out Abdalla, and restoring the Hindoo government throughout the empire. Thus the principal powers of Hindoostan were arranged in two parties; the Hindoos and Mahomedans: for the Jats joined the Mahrattas;

and Sujah Dowlah, with the Rohillas, and other Mahomedan chiefs of lefs note, joined Abdalla: and a battle ensued in the old scene of warfare, the plains of Carnawl and Panniput. There were said to be 150,000 Mahomedans, and no lefs than 200,000 Mahrattas, whose cause the Jats deserted, before the battle. This was the most important struggle that had taken place, since the contests between Aurungzebe's sons, in 1707. Victory declared for Abdalla, after a battle more obstinate and bloody than any that the records of Hindoostan can probably shew: the carnage of the day, and the number of Mahratta prisoners taken, were almost incredible; and great deeds of valour were performed on both sides. This battle was decisive of the pretensions of the Mahrattas, to universal empire in Hindoostan. They lost the flower of their army, together with their best generals: and from that period (1761) their power has been sensibly on the decline.

Abdalla's influence at Delhi was now unlimited; and he invited Shah Aulum thither (then engaged in Bahar, as abovesaid) promising to seat him on the throne of his ancestors. He, however, did not venture to trust himself in the hands of Abdalla: who therefore, as his presence was required in Lahore, where the Seiks were on the point of overpowering his garrisons, set up Jewan Buckt,* the son of Shah Aulum, for emperor, under the tuition and protection of Nidjib Dowlah; from whom he exacted an annual tribute. Thus, in fact, Abdalla became Emperor of Delhi: and if his inclinations had led him to establish himself in Hindoostan, it is probable that he might have began a new dynasty of emperors in his own person. He meant, probably, at some future time, to pursue his designs, whatever they were, either for himself or for the heir of the house of Timur, to which he had allied himself by a match with one of the princefses. His son and

* This is the person who visited Mr. Hastings at Lucknow, in 1784. He was about 13 years old at the time of Abdalla's last visit to Delhi.

succeſsor, the present Timur Shah, married another princeſs of the same line.

After the departure of Abdalla, it appears that all the territory remaining to Nidjib Dowlah, for himself and the young emperor, was the northern part of the province of Delhi. In the following year, 1762, both the Jats and Mahrattas preſsed hard on Nidjib Dowlah, but he either baffled them, or bought them off, and held his ground during his life time; and then transmitted his country, which is chiefly situated between the Ganges and Jumnah, to his son Zabeta Cawn, the present poſsesſor.

Shah Aulum, the legal emperor (whose son we have just seen in the character of his father's representative), was without territory, and without friends, save only a few Omrahs who were attached to his family; and were, like him, dispoſsesſed of their property and station. The expulsion of the Nabob of Bengal, Coſsim Ally, by the English, in 1763, by drawing Sujah Dowlah into the quarrel, was the means, once more, of bringing the wandering emperor into notice. But he had more to hope from the succeſs of the British arms, than those of his patron, Sujah Dowlah: and the uninterrupted succeſs that attended them in 1763, 64, and 65, by the dispersion of the armies of Coſsim Ally, and of Sujah Dowlah, and by the entire conquest of Oude and Allahabad, left both the emperor and Sujah Dowlah no hopes, but from the moderation of the victors. Lord Clive, who aſsumed the government of Bengal in 1765, restored to Sujah all that had been conquered from him, except the provinces of Corah and Allahabad; which were kept as part of an establishment for the emperor: at the same time he obtained from the same emperor, a grant of the provinces of Bengal, Bahar, and Oriſsa, together with the northern circars, on condition of paying the emperor 26 lacks of rupees (260,000l.) per annum, by way of tribute, or quit rent. The Corah provinces were valued at 30 lacks more. Thus was a provision made for the emperor, and a good bargain struck for the English; for Bengal

and the circars might be estimated at a million and a half net revenue, after the charges of the civil and military establishments were paid. The emperor was to reside at the city of Allahabad; and was, in effect, under the protection of the English, to whom he owed all that he poſſeſsed. A treaty offensive and defensive was entered into with Sujah Dowlah, Nabob of Oude: and his territories being situated so as to form a barrier to ours, a competent force stationed within them, served to guard both at the same time, and it was convenient to the poſſeſsor of Oude, to pay the expence of it, as if it had been retained for his service only.

It was, however, the misfortune of the emperor, that he could not accommodate his mind to the standard of his circumstances, although these were far more favourable now, than at any other period of his life. But being the lineal descendant of the house of Timur, he aspired to poſſeſs the capital city of his ancestors; and in grasping at this shadow, he lost the substance of what he already poſſeſsed. For after about 6 years quiet residence at Allahabad, he put himself into the hands of the Mahrattas, who promised to seat him on the throne of Delhi: those very Mahrattas, who had wrested the fairest of his provinces from his family, and whose object was to get poſſeſsion of the rest; and who intended to use his person and name, as one of the means of accomplishing it. A ceſsion of the Corah provinces to the Mahrattas, was the immediate consequence of this connexion: and had not the English interposed, the Mahrattas would have established themselves in that important angle of the Dooab, which commands the navigation of the upper part of the river Ganges, and the whole course of the Jumnah, and which would have brought them almost close to our doors; besides the evil of extending their influence and power, and of feeding their hopes of extending them still further. The principle on which the British government acted, was this: they considered the Corah, &c. provinces, which by right of conquest were originally theirs, as having reverted again to them, when they

were alienated from the purposes for which they had been originally granted to the emperor; and applied to the purpose of aggrandizing a power, which was inimical to them and to their allies. They therefore took poſſeſſion of those provinces again, and immediately ceded them to the Nabob of Oude, for a valuable conſideration. Indeed, it was a miſtake originally, not to reſtore the poſſeſſion of them to Sujah Dowlah, in common with the reſt of his territories; and to ſettle a certain ſtipend in lieu of them, to the emperor: for they, forming the frontier towards the Mahrattas and Jats, ſhould have been placed in hands that were better able to defend them.

The Mogul, however, went to Delhi; thereby loſing all that he had acquired from the Britiſh; and has ever ſince been a kind of ſtate priſoner: living on the produce of a trifling domain, which he holds by a tenure of ſufferance; allowed him partly out of veneration for his anceſtors, and partly for the uſe of his name. It muſt be allowed, that the princes of Hindooſtan have generally ſhewn a due regard to the diſtreſſes of fallen royalty (when life has been ſpared) by granting jaghires, or penſions. Ragobah's, is a caſe in point. The private diſtreſſes of Shah Aulum (it is almoſt mockery to call him the Great Mogul, or emperor) were, however, ſo preſſing, during Mr. Haſtings's laſt journey to Oude (1784), that his ſon Jewan Buckt came to ſolicit aſſiſtance from the Engliſh. Since the peace of 1782, Madajee Sindia, a Mahratta chief, and the poſſeſſor of the principal part of Malwa, has taken the lead at Delhi; and has reduced ſeveral places ſituated within the diſtricts formerly poſſeſſed by the Jats, Nudjuff Cawn, and the Rajah of Joinagur: and it may be concluded that Sindia has in view to extend his conquests on the ſide of Agimere: and to eſtabliſh for himſelf a conſiderable ſtate, or kingdom.

It might be expected that the Rajpoots of Agimere, &c. would be leſs averſe to receiving a ſovereign of their own religion, than they were to ſubmit to the Mahomedan emperors: and, more-

over, that it would be more for the interest of their people to be subjects, than tributaries, of the Mahrattas; these being mild as governors, although the most unfeeling, as collectors of tribute, or as enemies: yet it appears that they entertain the greatest jealousy of Sindia's designs; the accomplishment of which would make their princes sink into a state of greater insignificance than they are at present.

In a country so fruitful of revolutions, it is difficult to foresee the event of Sindia's present measures; but they point strongly towards raising him to the head of the western Mahratta state, or to that of a new empire founded on its ruins. The provinces of Agra and Delhi, and that whole neighbourhood, are in the most wretched state that can be conceived. Having been the seat of continual wars for near 50 years, the country is almost depopulated, and most of the lands, of course, are lying waste: the wretched inhabitants not daring to provide more than the bare means of subsistence, for fear of attracting the notice of those, whose trade is pillage. Nothing but the natural fertility of the soil, and the mildneſs of the climate, could have kept up any degree of population; and rendered the sovereignty of it, at this day, worth contending for. So that a tract of country which poſseſses every advantage that can be derived from nature, contains the most miserable of inhabitants: so dearly do mankind pay for the ambition of their superiors; who, mis-calculating their powers, think they can govern as much as they can conquer. In the Mogul empire, many parts of it were 1000 miles distant from the seat of government: and accordingly its history is one continued leſson to kings, not to grasp at too much dominion; and to mankind, to circumscribe the undertakings of their rulers.

It is highly improbable that the house of Timur will ever rise again, or be of any consequence in the politics of Hindoostan. It was in 1525 that the dynasty of Great Moguls began: so that reckoning to the present time (1788), it has lasted 262 years: a long period for that country.

SKETCH *of the* MAHRATTA *History.*

WE have frequently had occasion, in the course of the above sketch, to mention the MAHRATTAS: and as the rise and progrefs of that state is of much importance to the general history of the decline of the Mogul empire; and so remarkable in itself, from the suddennefs of its growth; it may not be improper to give a short history of it, in an uninterrupted narrative; although some part of the former one may be repeated.

The origin and signification of the word MAHRATTA (or MORATTOE) has of late been very much the subject of inquiry and discufsion, in India: and various fanciful conjectures have been made concerning it. We learn, however, from Ferishta,* that MARHAT was the name of a province in the Deccan; and that it comprehended Baglana (or Bogilana) and other districts, which at

* This information occurs not only in Ferishta's history of Hindoostan, but in that of the Deccan, &c. likewise. The former we have before spoken of, as being translated by Col. Dow: but the latter has never yet made its appearance in any European language. It is expected, however, that the public will soon be in pofsefsion of it, from the hands of Capt. Jonathan Scott, who has already exhibited a specimen of one part of his intended work; and has engaged to complete it, on conditions, which the public, on their part, appear to have performed. Ferishta lived in the court of Ibrahim Audil Shah, King of Visiapour; who was cotemporary with Jehanguire in the beginning of the last century. Ferishta's history of the Deccan, &c. opens to our view the knowledge of an empire that has scarcely been heard of, in Europe. Its emperors of the BAHMINEAN dynasty (which commenced with Hafan Caco, A. D. 1347) appear to have exceeded in power and splendour, those of Delhi; even at the most flourishing periods of their history. The seat of government was at Calberga (see Orme's Historical Fragments, p. cxxxvi.) which was centrical to the great body of the empire; and is at this day a considerable city. Like other overgrown empires, it fell to pieces with its own weight: and out of it were formed four potent kingdoms, under the names of Visiapour (properly Bejapour), Golconda, Berar, and Amednagur; whose particular limits and inferior members, we are not well informed of. Each of these subsisted with a considerable degree of power, until the Mogul conquest; and the two first, as we have seen above, preserved their independency until the time of Aurungzebe. It is worthy of remark, that the four monarchs of these kingdoms, like the Cæsars and Ptolemies, had each of them a name, or title, common to the dynasty to which he belonged; and which were derived from the respective founders. Thus, the kings of Visiapour, were styled Audil (or Adil) Shah: those of Golconda, Cuttub Shah; and those of Berar and Amednagur, Nizam Shah, and Amud Shah. A.

present form the most central part of the Mahratta dominions. The original meaning of the term Marhat, like that of most other proper names, is unknown; but that the name of the nation in question, is a derivative from it, cannot be doubted: for the testimony of Ferishta may be received without the smallest suspicion of error, or of design to establish a favourite opinion, when it is considered that he wrote, at a period, when the inhabitants of the province of MARHAT did not exist as an independent nation; but were blended with the other subjected Hindoos of the Deccan. Besides the testimony of Ferishta, there is that also of Nizam-ul-Deen,* an author who wrote at an earlier period; and who relates, in his general history of Hindoostan, that one of the kings of Delhi, made an excursion from Deogur (Dowlatabad) *into the neighbouring province of* MARHAT. †

Sevajee may be considered as the founder of the MAHRATTA EMPIRE. His ancestry is not very clearly ascertained; but the most commonly received opinion, is, that his grandfather was an illegitimate son of a RANA of Oudipour, the chief of the Rajpoot princes; the antiquity of whose house may be inferred from *Ptolemy*. (See the Memoir, page 153.) The mother of this illegitimate son is said to have been an obscure person, of a tribe named *Bonsola* (sometimes written Bouncello, and Boonsla), which name was assumed by her son, and continued to be the family name of his descendants, the Rajahs of Sattarah, and Berar. Having, after the death of his father (the Rana of Oudipour) suffered some indignities from his brothers, on the score of his birth, he retired in disgust to the Deccan, and entered into the service of the King of Bajapour (vulgarly Visiapour). The reputation of his family, added to his own personal merit, soon obtained for him a distin-

* Nizam-ul-Deen was an officer in the court of Acbar; and wrote a general history of Hindoostan, which he brought down to the 40th year of that emperor.

† This also occurs in Ferishta's history of Hindoostan. It was in the reign of Alla I. A. D. 1312. See also page lii of the Introduction.

guished rank in the armies of the King of Visiapour, in which he was succeeded by his son. But his grandson, Sevajee, who was born in 1628, disdaining the condition of a subject, embraced an early opportunity (which the distractions then existing in the Visiapour monarchy, afforded him) of becoming independent. So rapid was the progrefs of his conquests, that he was grown formidable to the armies of the Mogul empire, before Aurungzebe's acceſsion to power; having, before that period, seized on the principal part of the mountainous province of Baglana, and the low country of Concan, situated between it and the western sea. He had also acquired from the kingdom of Visiapour, the important fortrefs of Pannela, which commanded an entrance into the heart of it, from the side of Baglana; together with several other places of strength. In the Carnatic he had poſsefsion of Gingee, together with an extensive district round it:* and this perhaps may be considered rather as an usurpation of one of the Visiapour conquests, than as an acquisition made from the original sovereign of the Carnatic: for the King of Visiapour appears to have poſsefsed the southern part of the Carnatic, including Tanjore.† Great part of the history of Sevajee will be found in Mr. Orme's Historical Fragments of the Mogul Empire, and is well worth the reader's attention. At his death, which happened in 1680, his domains extended from the northern part of Baglana, near Surat, to the neighbourhood of the Portuguese districts of Goa, along the sea coast; but probably not very far inland, beyond the foot of the Gauts, and other ranges of mountains, which may be considered as branches of them; for Aurungzebe's army kept the field in Visiapour at that period, and neceſsarily straitened Sevajee's quarters on that side. These

* The French obtained the grant of Pondicherry in 1674, from a Rajah of Gingee, who acknowledged the King of Narsinga as his superior; but this latter was, at the same time, dependent on Visiapour. Sevajee took poſsefsion of Gingee about the year 1677, and confirmed the above grant in 1680.

† I am ignorant of the period when the Mahratta prince, whose descendants now hold Tanjore, came into the poſsefsion of it.

conquests were the fruits of hardy and persevering valour; partly acquired in despite of Aurungzebe, then in the zenith of his power. Sevajee had also plundered Surat and Golconda; and even attacked Goa, when the Portuguese power was at its height. His son Sambajee, though poſſeſsed of considerable ability both as a statesman and a soldier, fell a sacrifice to debauchery. In one of his loose excursions he was treacherously seized on, and cruelly put to death by Aurungzebe, in 1689. This, however, produced no submiſsion on the part of the Mahrattas, who still increased in power, though not so rapidly as before. The Roman state had scarcely a hardier infancy; and the mountains of Gatte, which shelter from the stormy monsoon the countries that are situated to the leeward of them, afforded also a shelter to this rising state.

Sahoo, or Sahoojee (vulgarly, Saow, or Sow Rajah), succeeded his father Sambajee at a very early age; and as he inherited the ability and vigour of mind of his immediate ancestors, and reigned more than 50 years, great part of it at a season the most favourable for the aggrandizement of a state that was to rise on the ruins of another, the Mahratta power grew up to the wonderful height that we have beheld it at. For the confusions occasioned by the disputed succeſsion among Aurungzebe's sons, and their descendants, opened a wide field to all adventurers; and particularly to this hardy and enterprizing people, bred in the school of war and discipline, and who had shewn themselves able to contend even with Aurungzebe himself. The conquests achieved under Sahoojee, are astonishing to those who do not know that Hindoostan is so full of military adventurers, that an army is soon collected by an enterprizing chief, who holds out to his followers a prospect of plunder; which the then distracted state of the empire afforded the most ample means of realizing. At the time of Sahoojee's death, which happened in 1740, the Mahratta state or empire had swallowed up the whole tract from the western sea to Oriſsa; and from Agra to

the Carnatic: and almost all the rest of Hindoostan, Bengal excepted, had been over-run and plundered. They were engaged in almost every scene of war and politics throughout the whole country; although it does not appear that they took any part in the contest between Nadir Shah and Mahomed, in 1738-9; except by availing themselves of the absence of Nizam-al-Muluck, to commit depredations on his territories in the Deccan. Probably they thought that more advantage would arise to them, from the disorders consequent on Nadir Shah's invasion, than by their afsisting the emperor in repelling him: we are also to consider the advanced age of Sahoojee, at that time.

It is difficult to trace the progrefs of the Mahratta conquests, according to the order of time, in which they were made. We find them taking part in the disputes between Aurungzebe's descendants at Delhi, as early as 1718: but it was not till 1735, that they found themselves strong enough to demand a tribute from the emperor, Mahomed Shah. This demand terminated, as we have before observed, in the acquisition of the greatest part of the fine province of Malwa; and in a grant of a fourth part of the net revenues of the other provinces in general. This proportion being named in the language of Hindoostan, a CHOUT, occasioned the future demands of the Mahrattas to be denominated from it: although they are by no means limited to that proportion, except in cases where an exprefs compact has taken place: as in some instances, between the Berar Mahrattas and the present Nizam of the Deccan. They also, about the year 1736, took part in the disputes between the Nabobs of Arcot, in the Carnatic; within which district, the principal European settlements on the coast of Coromandel, are situated: which disputes eventually engaged the French and English East-India Companies, in scenes of hostility for several years, as has been before observed.

The succefsor of Sahoojee, Ram Rajah, who succeeded in 1740, was a weak prince: and it happened in the Mahratta state, as in

all despotic states of rapid growth, and recent formation, that great part of what was gained by the ability of one despot, was lost by the imbecility of another. The two principal officers of the state, the *Paishwah*, or minister, and the *Bukshi*, or commander in chief, agreed to divide the dominions of their master: Bajirow, the paishwah, afsuming to himself the government of the western provinces; and Ragojee, the bukshi, the eastern provinces: the former continuing at Poonah, the ancient capital; the other fixing his residence at Nagpour in Berar.

The paishwah is said to have confined the Ram Rajah to the fortrefs of Sattarah (about 50 miles from Poonah) and then administered the government in his name. It is probable, from other accounts, that Sahoojee, during the latter part of his reign, had, by a long and unrevoked delegation of power to the paishwah, prepared the minds of the people for this measure; which, to them, hardly appeared to be a change: as Sahoojee, in a manner, shut himself up in Sattarah, and seldom appeared in any act of government. There is some degree of analogy between this part of the history of the paishwahs, and that of the mayors of the palace, in France.

So violent a partition of the empire by its ministers, encouraged, as might be expected, the usurpations of others, according to the degree of power, or opportunity, pofsefsed by each: so that in the course of a few years, the state became, from an absolute monarchy, a mere confederacy of chiefs; and the loosest example of feudal government in the world. The two chiefs of the divided empire pursued each their plans of conquest, or negociation, separately; on the general principle of respecting each others rights. The local situation of the Berar chief, who was lefs powerful than the other, led him to a close connexion with the Nizam; though not profefsedly in opposition to the Poonah chief.

The invasion of Bengal (of the causes of which we have spoken in page lxix) was undertaken by both the Mahratta states in 1742,

and 1743, with armies said to contain 80,000 horsemen each. The leaders of these armies appearing each to act for himself, the consequence was, that the wily Aliverdy found means to bribe one party, and to sow diſsensions between both; by which the consequences were leſs dreadful to the Bengallers, than they otherwise must have been. Still, however, they are remembered with horror: and I have myself beheld many of the objects of their wanton barbarity, mutilated and defaced. As 160,000 horsemen were let loose over the level country on the west of the Ganges; and the capital, Moorshedabad, being 12 miles from that river, it was cut off from all supplies of provisions and neceſsaries,* until Aliverdy doubly intrenched the road leading from the city to the Ganges; and thus supplies were conveyed in safety to the city, which was inclosed by another intrenchment, or rampart, of about 18 miles in circumference. The Mahrattas did not depart out of the provinces until the year 1744, when they had collected a vast maſs of plunder, and had established the claim of the *chout*; which, however, was never regularly paid. The Berar Mahrattas having, some years afterwards, obtained poſseſsion of the Oriſsa province, partly by conquest, partly by ceſsion from Aliverdy, their proximity to Bengal, from which they were separated only by a shallow river, afforded them frequent opportunities of plundering its frontier provinces: and it was not till the year 1761, when Coſsim Ally, Nabob of Bengal, ceded the provinces of Burdwan and Midnapour to the English, that the Mahrattas ceased to plunder them. The demand of the chout, however, although made occasionally, previous to the ceſsion of Bengal to the English, had never been enforced: and during the war of 1780, when almost all the powers of Hindoostan were leagued together against the English, it was very feebly, if at all, insisted on, although the Berar Rajah had an army at Cattack.

* The city of Moorshedabad is situated on the westernmost branch of the Ganges: which branch is navigable only during a part of the year. See the Appendix.

The administration of Bajirow was as vigorous as could pofsibly be expected, considering how the reins of government had been slackened: to the Mahratta empire, it was glorious; for he wrested out of the hands of the Portuguese the fortrefs of Baſseen, and the island of Salsette, near Bombay; places that stood in the next degree of importance to Goa. He died in 1759, leaving the paishwahship, which was now considered as an hereditary establishment, to his son Ballajee.

At this period the Mahrattas pushed their conquests into the Panjab, and even to the banks of the Indus. But the time was approaching, when this sudden elevation (which seems, in some instances at least, to operate in states as in individuals) was to serve only to make their downfall more conspicuous. They and Abdalla had given each other mutual umbrage; and the wars that ensued between them, which ended with the famous battle of Panniput, of which we have already given an account in page lxxiv, was decisive of the pretensions of the Mahrattas as Hindoos, to universal empire in Hindoostan; which they at that time (1761) found themselves strong enough to dispute with the Mahomedans.

Ballajee died soon after. To him succeeded his son Maderow, a youth. The Mahrattas had now abated of their ardour for distant expeditions, and their quarrels were chiefly with their neighbour, the Nizam; whom they by degrees stripped of a considerable portion of his territories on the north and west of Aurungabad. Maderow died in 1772; and was succeeded by his son Narain Row, who was murdered the following year by Ragobah, his uncle, and son of Bajirow, the first paishwah who aſsumed the sovereignty. The atrocity of this crime, made the author of it (who had been a general of reputation in the war against Hyder Ally, and the Nizam) detested by the body of the people, and caballed against by the chiefs: he besides failed in the object of clearing his way to the paishwahship, for the widow of Narain produced a boy, who was acknowledged heir.

Ragobah, who stood in need of allies, had engaged the government of Bombay in his cause; with whom a treaty, very advantageous to the English, and indeed, embracing the principal advantages so long desired by the East-India Company, was entered into: and the fleet and army belonging to the Presidency of Bombay, were accordingly put in motion, to second the views of Ragobah, and to secure the advantages derived from the treaty. Hostilities were commenced both by sea and land; and the island of Salsette, separated from Bombay only by a narrow channel of the sea, was taken poſsefsion of by the English. This was a most desirable acquisition, as the settlement of Bombay poſsefsed no territory beyond the extent of the small island in which it is situated; and consequently depended on foreign supplies for its subsistence.

About this time the Council General of Bengal was invested with a controlling power over the other settlements in India: and the Mahratta war not meeting their approbation, Col. Upton was sent to Poonah in 1776, to negociate a peace (since known by the name of the treaty of Pooroondar), by which Ragobah was to renounce his pretensions, and to receive a pension for life; and the English were to retain poſsefsion of Salsette. But in the end of 1777, the Bombay government again espoused the cause of Ragobah, which measure terminated in a disgraceful convention, by which the Bombay army retired to their settlement, and Ragobah surrendered to his enemies. Being of Bramin race, his life was spared.

The war that followed between the English and the Mahrattas, was purely defensive on the part of the latter, after the arrival of a brigade of the Bengal army, under General Goddard; and was attended with the conquest, on the part of the English, of the finest parts of Guzerat, and the Concan; including the important fortreſses of Baſseen and Amedabad; in short, of the whole country from Amedabad to the river Penn; and inland, to the foot of the

Gauts: and on the side of Oude, the province of Gohud, and other districts, together with the celebrated fortrefs of Gwalior, were reduced; and the war carried into the heart of Malwa. But the expences of a succefsful war may be too grievous to be borne: and as a war with Hyder Ally had broke out in 1780, and still continued, it was justly esteemed a most desirable advantage to effect a peace with the Mahrattas, after detaching Sindia, the principal member of that state, from the confederacy. This peace was negociated in 1782 and 1783, by Mr. David Anderson, whose services on that memorable occasion, claim, as is said in another place, the united thanks of Great Britain and Hindoostan. All the acquisitions made during the war were given up, save Salsette, and the small islands situated within the gulf formed by Bombay, Salsette, and the continent.

The government at Poonah, during the minority, was shared among a junto of ministers: and it is probable that so long a minority may yet make some efsential changes in the constitution of a state so accustomed to revolutions in the superior departments of its government. The present paishwah, by name Maderow (son of Narain Row, as beforementioned), was born in 1774.

The eastern Mahratta state, or that of Berar, under Ragojee, kept itself more free from foreign quarrels than the other; but had its share of intestine wars. For Ragojee dying, after a long reign, left four sons, Janojee, Sabajee, Modajee, and Bembajee. The first succeeded his father: but dying childlefs, in 1772, a civil war commenced between Sabajee and Modajee: the former of whom fell in 1774, and the latter still holds the government of Berar, &c.: and Bembajee administers those of Ruttunpour and Sumbulpour, under him: though, I believe, with lefs restraint from his superior, than is ordinarily imposed on governors of provinces. Ragojee, the father of the present Rajah of Berar, being a descendant of Sevajee, the original founder of the Mahratta state, the present rajah is therefore by descent, the lawful sovereign of

the whole Mahratta state; the Poonah branch being extinct:* but it appears that he wisely prefers the peaceable poſſeſſion of his own territories, to risking the loſs of them, where the object is no more than the nominal government of an empire, which even manifests symptoms of speedy diſsolution.

It is not likely that either of the Mahratta states will soon become formidable to the other powers of Hindoostan. The eastern state has not resources for it; and as for the western, it cannot well happen there, until some one of its chiefs has gained such an ascendancy over the rest, as to re-unite that divided power, to which the late confusions in their government gave birth. It requires some length of time to reduce a feudal government to a simple monarchical one: and till then, the western Mahratta state cannot be formidable, to the British power, at least. If Sindia proceeds with his conquests to the north and west, and establishes a new empire in Malwa, &c. this Mahratta state (the western) must be extinguished; and such a new empire would, perhaps, prove more formidable to Oude, and to the British interests, in consequence, than any power we have beheld since the first establishment of the British influence in India.

* Some believe that a rajah of Sevajee's line is still living; shut up in the fortreſs of Sattarah. It is certain that the new paishwahs go thither, to receive the inveſtiture of their office; as they were accuſtomed to do, in former times: whether such a rajah be in exiſtence, or otherwiſe, is of no importance to the ſtate, as matters are now conſtituted.

Conquests *of* European Powers, *since the Downfall of the* Mogul Empire.

Among the new powers that arose on the downfall of the Mogul empire, we must not forget to mention the French and English. As for the Portuguese, their power had past its meridian before this period: besides, their views being (apparently) confined altogether to traffic, they wisely made choice of insular situations; such as Goa, Bombay, Salsette, Diu, &c.; and never appear to have poſseſsed any very considerable extent of territory, although they kept on foot a large army of Europeans. The Dutch system was nearly the same: and their prosperity, in a great measure, grew out of the misfortunes of the Portuguese; who having fallen under the dominion of Spain, became obnoxious as well to the jealousy of rivalship, as to the revenge of the Hollanders.

The French power was but of short duration, but remarkably brilliant. It was a bright meteor, that dazzled at first, but which soon burnt itself out, and left their East-India Company in utter darkneſs. It commenced during the government of M. Dupleix at Pondicherry, in 1749. The French having aſsisted a soubah of the Deccan in mounting the throne, attended his future steps with an army, and established an influence in his councils that promised to be permanent; but which vanished very early, by the mere breath of court intrigue: for while M. Buſsy, at the head of the French army, was at Sanore, in the western quarter of the peninsula (in 1756), a quarrel with the minister of the soubah, effected the dismiſsion of the French. They were then compelled to retreat through an enemy's country for near 300 miles, until they reached

Hydrabad; where they fortified themselves, and waited for a reinforcement from Masulipatam, their nearest settlement; which was upwards of 200 miles from Hydrabad. Great ability was discovered by M. Bufsy, on this memorable occasion: an account of which, as well as of M. Bufsy's warfare and negociations in general, will be found at large, in Mr. Orme's invaluable History of the Military Transactions of the British Nation, in Hindoostan. At Hydrabad, the quarrel was compromised: and the following year (1757) and part of the next, was spent by M. Bufsy in reducing the refractory rajahs, or zemindars, in the northern circars; and in afsisting the soubah in the execution of his own plans. But in the midst of these transactions, he was suddenly recalled into the Carnatic, by M. Lally; who determined to collect the whole force of the French, within that quarter: so that the soubah was left at full liberty to accede to the proposals of the English. Lally was also justly accused of being jealous of the fame of M. Bufsy.

The circars, the fruits of M. Bufsy's wars and negociations in the Deccan (and which had been obtained in 1753), yet remained to the French: but Colonel Clive, who was at this time Governor of Bengal, with that promptitude and decision which so strongly marked his character, seized on them, with a force from Bengal, in 1759; although they were defended by a much superior one; and the French were deprived of resources to carry on the war in the Carnatic. So that Lally failed to accomplish the purposes for which the French interest in the Deccan had been relinquished; namely, that of expelling the English from the Carnatic: for, on the contrary, the French not only lost all their pofsefsions in that quarter, but in every other part of India. Thus, their political existence may be said to begin, in 1749; and to end in 1761, by the capture of their principal settlement, Pondicherry. They appear to have been the first European power, that trained the natives of India to regular disci-

pline ;* as well as the first who set the example of acquiring territorial poſseſsions, of any great extent, in India: in which they have been so succeſsfully followed by the English.

THE expedition of the British troops into Tanjore, in 1749, was the first warfare in which they were engaged, against the forces of an Indian prince: and it proved unsucceſsful, as to its main object; which was, the restoration of a deposed king, or rather rajah, of Tanjore, who had applied for aſsistance to the governor of Fort St. David. The price of this aſsistance, was to be the fort and territory of Devicottah, situated at the mouth of the Coleroon, or principal branch of the Tanjore river: and this fort, notwithstanding their want of succeſs in the cause of the deposed rajah, the Company's troops, aided by the fleet under Admiral Boscawen, took poſseſsion of, after a short siege. In the following year they were called on, by the circumstances of the times, to take part in the disputed succeſsion to the nabobship of Arcot, in opposition to the French: who (as has been before observed) had taken the lead, both in the affairs of the Carnatic, and of the Deccan. We have also observed, that Nizam-al-Muluck, soubah of the Deccan, had placed Anwar o'dien in the nabobship of Arcot (in 1743); and that the death of the same Nizam, in 1748, had occasioned a considerable change in the politics of the Deccan; in which the French engaged so deeply. Chunda Saib was the person whom the French wished to raise to the government of Arcot: and the expulsion of the family of Anwar o'dien, was a neceſsary step towards it. These contests, which had been carried on with great credit to the British arms, were put an end to, by the interference of the two East-India

* I am far from being well informed concerning the early history of the Portuguese in India: but by a paſsage in Mr. Orme's Historical Fragments, page 175, it would appear that they had not, in 1683, trained the natives to regular discipline. He says, "The Viceroy of "Goa took the field (against Sambajee) with 1200 Europeans, and 25,000 *natives of his own* "*territory*." From the confined limits of the Portuguese territories, we may conclude that these were the ordinary inhabitants only.

Companies, in Europe, in 1754: and Mahomed Ally, son of Anwar o'dien (who had fallen in the course of the war), was left in poſsefsion of the Carnatic; or, at least, of that portion of it which had been recovered to him by the British arms. The particulars of these wars will be found in Mr. Orme's History, volume the first.

War breaking out in Europe in 1756, the truce was reduced to a very short period. The first object of the British Councils, was to wrest the northern circars out of the hands of the French; as their revenue furnished them with the means of paying their army. The second was to drive M. Buſsy's force out of the Deccan, by means of an alliance with the Nizam, or Soubah. Both of these projects were at this time defeated; the first by the miscarriage of dispatches to India; the second, by the capture of Calcutta, the chief British settlement in Bengal, in June, 1756: and which induced the necessity of relinquishing every plan of hostility in the Deccan and Carnatic, in order that a force might be spared sufficient to accomplish the recovery of so important a settlement as Calcutta; on which the whole trade to Bengal depended.

Aliverdy Cawn, Nabob of Bengal, died in 1756, and was succeeded by his grandson Surajah Dowlah. This young man either was, or pretended to be, irritated at the conduct of the English within his dominions; and was probably jealous of the rising power of Europeans in general, in other parts of India. He determined to expel the English (at least) from Bengal: and accordingly took their fort at Calcutta, and compelled those among them, who were not made prisoners, to retire. In the following year, an armanent from Madras, under Admiral Watson and Colonel Clive, not only recovered the settlement of Calcutta, but brought the nabob to terms. The sword, however, being thus drawn, no permanent security could be expected on the side of the intruders, unleſs supported by power: which could not be obtained, while a nabob, inimical to their interests, poſsefsed the whole power of the kingdom. Suspicions on both sides soon brought matters to a

crisis: and Jaffier Ally Cawn, an omrah in high trust and favour with the nabob, was negociated with; and, on condition of their afsisting him in his views towards the throne, engaged to be their future *ally and confederate*; for, so much were matters changed by the late eſsay of their strength, and by the genius and good fortune of Clive, that *protection* would ill expreſs the current expectation of the British. The famous battle of Plaſsey, fought in June, 1757, and in which Jaffier aided the accomplishment of their wishes, by standing neuter, laid the foundation of the future power of the British nation in Bengal and Hindoostan. From that time they became the arbiters of the succeſsion of the nabobship of Bengal; which speedily led to the poſseſsion of the powers of government: for Coſsim Ally, who had been placed in the room of Jaffier, diſliking his situation, resolved to hazard a change at all events; and this brought on a war, which ended in the expulsion of Coſsim, and left the Bengal provinces in the poſseſsion of the English, who restored Jaffier to the nabobship. He had been deposed, on a charge of imbecility, in 1760, and was restored in 1763. Coſsim retired to Sujah Dowlah, Nabob of Oude, and prevailed on him to espouse his cause. Sujah had distinguished himself in the celebrated battle of Panniput, in 1761; and is reported to have had a conſiderable share in turning the fortune of the day, at the very moment when victory inclined towards the Mahrattas. Whether he over-rated his own talents for war, or mistook the military character and resources of the British, he, however, engaged too raſhly in the war; and the consequences were, a total defeat of his forces, joined with Coſsim Ally's, at Buxar, in 1764: and this was followed by the loſs of all his territories, during that and the following year.

Those, whose belief has been staggered by the accounts of the conquests made on the Indians and Persians, by the Grecian, Patan, and Mogul armies, may reconcile their doubts by attending to the events of their own days; in which a handful of French troops

effected revolutions in the Deccan: and another of British, made an entire conquest of Bengal, Bahar, and Oude, in little more than two campaigns. Each of those conquerors, both ancient and modern, after gaining certain advantages, pursued them by means of levies raised in the conquered countries themselves; and thus rendered the vanquished subservient to the final reduction of their own country. This was even the case of Alexander, who set out with 35,000 men, and left India, with 120,000. Such measures could only be pursued in countries, where the habit of changing their governors, had rendered the governed indifferent to the choice of them. Even the whole number of the combatants on the side of the British, did not exceed 7000, at the battle of Buxar: and of these 1200 might be Europeans. The battle of Plaſsey was gained with an army of about 3000 men; of whom 900 only were Europeans.

Lord Clive, who reaſsumed the government of Bengal, in 1765, found matters in the state I have represented. He seized the opportunity of taking poſseſsion of the Bengal provinces; the Nabob Jaffier Ally being just dead; and obtained from the nominal Mogul, Shah Aulum (who, together with his nominal vizier, Sujah Dowlah, had, as before related, thrown themselves on the generosity of the British); a grant of the duanny, or administration of the revenues of Bengal, Bahar, and Oriſsa; on condition of paying the Mogul 26 lacks of rupees per annum (260,000l.). Thus a territory producing at that time, at least a million sterling, per annum, after every expence was defrayed, and containing at least ten millions of inhabitants, was gained to the Company, on the side of Bengal: together with the northern circars, valued at near half a million more, and for which a grant was also obtained. Sujah Dowlah had all his territories restored to him, except the provinces of Corah and Allahabad, which were retained for the Mogul; together with the fortreſs of Allahabad, which was aſsigned to him, as a proper place of residence.

Although the English were thus firmly and peaceably established in Bengal, in 1765, yet within two years afterwards, they were engaged in a very arduous contest in the peninsula, with Hyder Ally, the sovereign of Mysore, leagued with the Nizam or Soubah of the Deccan. Hyder's history is now so well known to the generality of readers in Europe, by means of the several publications that have lately appeared,* that it will be unnecefsary to give any thing more than a short abstract of it, here.

Hyder Ally was a soldier of fortune, and the son of a person who served in quality of *Killadar*, or governor of a small fortrefs, to one of the kings of Mysore. He is said to have acquired the rudiments of war in the French camps: and in the year 1753, distinguished himself, as their auxiliary, in the plains of Tritchinopoly. About ten years afterwards, being then at the head of the Mysore army, he dethroned his sovereign, and governed under the title of Regent. Soon after he extended his dominions on every side, the Carnatic excepted: the fine province of Bednore or (Biddanore) and the Patan nabobships of Cuddapah, Canoul, &c. besides some Mahratta provinces towards the river Kistna; and the country of the Nairs, and other small states on the Malabar coast, were added to his original poſsefsions; until at last he was at the head of a state, in extent equal to Great Britain, and producing a grofs revenue of four millions sterling. The civil broils and revolutions in the western Mahratta state, particularly in latter times, allowed Hyder to aggrandize himself at its expence; but he, nevertheleſs, received some severe checks from that quarter. He was not arrived at the height of his power, when the war between him and the English broke out, in 1767: but his power was such as to alarm his neighbours, and a resolution was taken to attack him. The Mahrattas under Maderow, entered Hyder's country on the side towards Visiapour; and the Nizam, joined by a de-

* Capt. Robson's, and M. M. L. D T.'s Lives of Hyder Ally, &c. &c.

tachment of British troops, moved from Hydrabad towards the frontier of Mysore, soon after. Hyder first contrived to buy off the Mahrattas with a large sum of money, and the restitution of some of the places he had taken from them. Next, he negociated with the Nizam, and had the addrefs, not only to detach him from the English, but to draw him over to his party: so that the English detachment was compelled by neceſsity to retire to the Carnatic; on the frontiers of which their grand army was now aſsembling. Besides the whimsical character of the Nizam, several other circumstances might conspire towards the determining him to act in the manner he did. The grant of the northern circars, and the emancipation of the Carnatic from any dependence on the Deccan, both of which were obtained from the Mogul, by the English, could not but be very mortifying to the Nizam; as having the appearance of a forcible partition of his territories. The circars, however, came into their hands (as we have seen) by conquest from the French, to whom they were originally granted by a former soubah of the Deccan: so that the grant from the Mogul was merely nominal: besides, the Nizam had been prevailed on to acquiesce in the measure, by an offer on the part of the English, of five lacks of rupees (50,000l.) per annum, by way of tribute or quit rent. As to his superiority in the Carnatic, it had ever been nominal; yet Hyder, who now meditated the conquest of it, was glad to obtain from the Nizam, a grant, or sunnud, for the nabobship of it: and from this time, at least, he considered Mahomed Ally as his rival. It is proper to observe, that in the days of Mahomed Ally's distreſs, when he poſseſsed only a small part of the Carnatic, he had engaged to cede the fortreſs of Tritchinopoly, a most important post in the southern division of it, to the king of Mysore, for aſsistance then afforded him: but this engagement never being performed, Hyder, as might be expected, adopted the claims and resentments of the prince, whose throne he had taken poſseſsion of; and never lost sight of his title to Tritchinopoly. Had the

engagement been fulfilled, it would have had the effect of separating for ever, from the nabobship of the Carnatic, the provinces of Tanjore, Madura, and the rest of the southern provinces.

The war that immediately followed, was productive of some sharp battles, on the common frontiers of the Carnatic and Mysore: besides which, a strong detachment of the British army seized on Hyder's province of Coimbettore, a fertile district on the south of Mysore, and commanding the readiest way to Hyder's capital, Seringapatam. This was the first war in which the British arms had met with any steady opposition from a prince of the country; for in the affair of Tanjore, in 1749, their arms were triumphant in the end, by the taking of Devicottah, their proper object. The war was continued with various succefs, during the years 1767, 1768, and part of 1769; when Hyder, with a strong detachment of chosen troops, chiefly horse, giving the British army the slip, came within seven miles of Madras, and dictated a peace to the government of that place. This peace was disreputable to the British councils only: since the hands of the Commander in Chief (General Joseph Smith) were tied up, at the very moment, the most favourable for striking a blow; and when Hyder, fearing the general's approach, could purchase his security no other way than by intimidating government into the measure of laying their commands on the general, not to advance; by which measure he might pofsibly have cut Hyder and his detachment to pieces.

The Nizam, very early in the war, had been detached from Hyder's alliance; chiefly by the strong measure of sending a detachment from Bengal, into the heart of Golconda; which made him tremble for his capital, Hydrabad.

The peace left matters much in the same state as before the war: and whatever credit Hyder might have gained by the conclusion of it, was done away by the total defeat which he suffered, in 1771, from the Mahratta army, within a few miles of his capital; into which he escaped with great difficulty, with a small remnant of

his army, and afterwards defied the attacks of his numerous enemies, who poſsefsed neither the skill, nor the ordinary requisites for a siege. Hyder waited in patience, until the enemy by desolating the country, were compelled to leave it. A few years of peace not only restored matters to their former state, but improved both his revenues and his army, to a degree beyond probability; and at the same time, the distractions that prevailed among the Mahrattas, enabled him to extend his territories at their expence. Such are the effects of firmneſs, perseverance, and economy.

It may be asked, how the Mahrattas, who are represented as so inferior in point of discipline to Hyder's troops, came to defeat him? It is accounted for by the vast superiority in numbers of the Mahratta army (chiefly horse), which surrounding Hyder's troops, cut off their supplies of provisions, and compelled them to retire towards their capital; through a level, open country, the most favourable to the attacks of cavalry. Hyder's army was formed into one vast hollow square, and marched, closely surrounded by the Mahrattas; when the advanced front of the square making too hasty a step, separated from the others; and the Mahrattas, pushing through the openings thus made, threw Hyder's whole army into irreparable disorder.

We have spoken before concerning the treaty made with the Nabob of Oude, and the mutual advantages derived to both parties; but particularly to the British, from the mode of defence adopted for Oude, considering it as a common frontier to both states: as also concerning the departure of the Mogul, in 1771; which threw the Corah, &c. provinces, into the hands of Sujah Dowlah.

It may be supposed, that the opposition made to the Mahrattas, when they attempted to take poſsefsion of those provinces in 1772, must have created some disgust. Indeed the British government had long considered the Mahrattas, in the general scope of their designs, as inimical to its interests. In 1773, the Mahrattas croſsed the Ganges to invade the Rohilla country. A brigade of the

British army marched to the western frontier of that country, and drove the Mahrattas acrofs the river. For this protection, the Rohilla chiefs had ſtipulated to pay Sujah Dowlah forty lacks of rupees (it muſt be obſerved that the Britiſh army moved, only as his allies): but when this eſſential ſervice was performed, the payment of the money was evaded. This breach of treaty led to the invaſion and conqueſt of the Rohilla country, the following year, 1774. A conſiderable tract of land in the Dooab was alſo conquered from the Jats, and other adventurers; by which the boundary of Oude was advanced weſtward within 25 miles of Agra; north-weſtward, to the upper part of the navigable courſe of the Ganges; and ſouth-weſtward, to the Jumnah river. In the following year (1775), on the death of Sujah Dowlah, and the acceſſion of his ſon Azuph, a new treaty was made with the Britiſh government, by which the quantum of the ſubſidy for the uſe of the brigade was increaſed, and the province of Benares, which produced a clear revenue of 240,000l. per annum, was ceded to the Company.

The war with the Poonah, or weſtern Mahrattas, of which we have already ſpoken (in page lxxxvii), occaſioned the march of a brigade acrofs the continent to the ſide of Bombay and Surat, in 1778-9. This is, perhaps, the moſt brilliant epoch of the Britiſh military hiſtory in India. The brigade, which conſiſted of leſs than 7000 men, all native troops, commanded by European officers, marched from the banks of the Jumnah to the weſtern ſea, in deſpite of the Mahrattas, whoſe empire they traverſed almoſt the whole way. The French war breaking out at this time, and Hyder Ally expecting a communion of intereſts with the French, he, in the autumn of 1780, broke into the Carnatic with 100,000 troops; and thoſe, both of foot and horſe, the very beſt of their kind that had ever been diſciplined by a native of India. His ſucceſs in cutting to pieces Col. Baillie's detachment, and the conſequent retreat of the Carnatic army, occaſioned the Britiſh

interests in that quarter to be given up for lost, in the opinion of most people in Europe. Happily, Mr. Hastings and Sir Eyre Coote thought otherwise: and there was sent from Bengal, to the relief of the Carnatic, a brigade of about 7000 men; together with ample supplies of money and provisions. Until the arrival of these troops and supplies, the British poſſeſsed nothing more in the Carnatic, than the ground occupied by their camps and fortreſses. Under Sir Eyre Coote, Hyder was succeſsfully combated during two campaigns; at the end of which (October, 1782) he found the poſſeſsion of his object, the Carnatic, at so great a distance, that he appeared to be sincerely desirous of peace. So vast an army as he brought into the field, could not long be supported in it, by the revenues of Mysore alone; and the Carnatic was quite exhausted. Anticipation of revenue in Asiatic governments, has an immediate destructive effect; and cannot often be repeated. Hyder therefore saw the neceſsity of quitting his ambitious projects; and probably would never have pursued them, had he not expected a more early and effectual co-operation on the side of the French; with whose aſsistance he hoped to effect our expulsion, in a campaign or two. But he became, perhaps, more jealous of the French than of the English; and had the peace of Paris left the Carnatic in his hands, instead of Mahomed Ally's, the French would eventually have been on a worse footing than they are now likely to be: for he certainly never intended that they should aſsume any character in it, beyond that of merchants; although their object was the obtaining of a territorial revenue; without which, they well know, no European power can easily effect any thing against another, already in poſseſsion of one. In this disposition of mind, Hyder died soon *

* The character of the late Hyder Ally appearing to me to be but little underſtood in this part of the world, I have ventured to attempt an outline of it. His military ſucceſs, founded on the improvement of discipline; attention to merit of every kind; conciliation of the different tribes that served under his banners; contempt of state and ceremony, except what naturally arose from the dignity of his character; and his consequent economy in perſonal expences (the different habits of which, form the chief distinction of what is called Character

after; and was succeeded by his son Tippoo, who seemed determined to prosecute the war. It was supposed that an attack of Tippoo's provinces, on the west of India, would, by giving an immediate entry into the most valuable part of his dominions, draw him from the Carnatic: and although there could be little doubt of its producing this effect, yet that part of the plan, which regarded the retreat, or security of the troops afterwards, does not appear to have been so well concerted. The deplorable end of this detachment,* which was commanded by General Matthews, is too well known. At last, Tippoo finding that the Mahrattas, his natural enemies, were at peace with the English, and consequently at liberty to pursue their ancient enmities; and moreover that the French had left him; he condescended, though reluctantly, to make peace: and matters were restored nearly to the condition they were in, before the commencement of hostilities. This peace was signed in March, 1784, at Mangalore.

During the whole course of Sir Eyre Coote's warfare with Hyder Ally, it appeared, that nothing decisive could be accomplished, while the latter poſseſsed so large a body of excellent cavalry, together with draught cattle so superior to ours, that his guns were always drawn off, and their retreat covered, although his army was beaten. The inconveniencies arising from the want of a sufficient body of cavalry, may, perhaps, be incurable; but with early and proper attention, we might surely have our choice of draught cattle.

among ordinary princes) together with his minute attention to matters of finance, and the regular payment of his army; all these together, raised Hyder as far above the princes of Hindoostan, as the great qualities of the late Prussian monarch raised him above the generality of European princes: and hence I have ever considered Hyder as the FREDERICK of the East. Cruelty was the vice of Hyder; but we are to consider that Hyder's ideas of mercy were regulated by an Asiatic standard; and it is not improbable that he might rate his own character for moderation and clemency, as far above those of Tamerlane, Nadir Shah, and Abdalla, as he rated his discipline above theirs.

Sir Eyre Coote survived Hyder only about five months. It is a remarkable circumstance that the commanders in chief of two armies, opposed to each other, should both die natural deaths, within so short a space of time.

* In April, 1783.

We have slightly mentioned a general confederacy of the powers of Hindoostan, against the British. The Nizam or Soubah of the Deccan, having taken disgust at the conduct of the Madras government towards him, in 1779, determined on a very deep revenge. This was no less than to engage all the principal powers of Hindoostan and the Deccan to join in a confederacy to expel the British. The Poonah Mahrattas were already engaged, and Hyder preparing; there remained the Nizam himself, and the Berar Mahratta.* Each party was to pursue a particular scheme of attack, suited to his local position and means. Hyder was of course, to attack the Carnatic: the Nizam, the circars: the Poonah Mahrattas were to keep the Guzerat army, under Goddard, employed; and the Berar Mahratta was to invade and lay waste the Bengal and Bahar provinces. It has been the fate of most of the grand confederacies that we meet with in history, that they have terminated rather in mutual blame, than mutual congratulation. The truth is, that they are seldom, if ever, pursued with the same unity of action, and energy, that are displayed by single states. Some are more deeply interested than others: one fears that another will be too much aggrandized; and a third is compelled to take part, contrary to his wishes. In the present case, the Poonah Mahratta and Hyder were each pursuing their proper, original plans, which had no reference to the particular object of the confederacy: the projector (the Nizam) had probably no intention ever to act at all: and the Berar Mahratta, appeared to act on compulsion: for although the Berar army *did* march, it was contrived that it should never arrive at the projected scene of action. Be it as it will, it was an awful moment for the British interests in India. The speedy pacification of the Nizam, and the money advanced to the Berar army at Cattack (call it by what denomination we may, subsidy, or

* It has been said, that Nudjuff Cawn, who in latter times erected for himself a principality in the soubah of Agra, made a fifth party in this confederacy. Of this circumstance, I am not sufficiently informed.

loan) were means very opportunely used by the Bengal government. Indeed the whole conduct of the war was such as reflected the highest honour on that government: and when we succeſsively were made acquainted with the news of the capitulation of the whole Bombay army in 1779; of the total annihilation of the flower of the Madras army in 1780; the approach of the Berar army towards Bengal in 1781 (which seemed to preclude all poſsibility of relieving the Carnatic by a brigade from Bengal), together with the grand confederacy: I say, when the news of all these misfortunes and threatening appearances reached Europe, every one had made up his mind to the certain loſs of some capital settlement, or to the mutiny of one of the grand armies, for want of pay: and many persons thought that they saw the total destruction of the British influence and power in India. How then were we surprised, to find, that notwithstanding all these miscarriages, we were able, soon after, not only to face, but to seek the enemy in every quarter: and to hear of victories gained by the British armies, when we expected that even the very ground they fought on, had been abandoned to our enemies!

The establishment of the British power in the Mogul empire, has given a totally different aspect to the political face of that country, from what it would have worn, had no such power ever existed. No one can doubt that the Mahrattas, had they been left to pursue their plans of conquest, would have acquired Corah and Allahabad in 1772, as well as the Rohilla country in 1773: and afterwards they might have over-run, at their leisure, the province of Oude, and its dependencies. The British interference prevented this. On the other hand, Hyder might have kept poſseſsion of the Carnatic. Some may be tempted to ask whether Hyder might not be as good a sovereign as Mahomed Ally; or the Mahrattas, as Azuph Dowlah? Whatsoever may be the answers to these questions, they have no reference to the British politics; which require that Hyder or Tippoo, should not poſseſs the Carnatic, in addition to

Mysore: and that the Mahrattas should not poſſeſs Oude, or Rohilcund.

I believe there are many who think that the British might have extended their poſſeſſions in Hindoostan, *ad libitum:* however, one of the greatest of our Indian statesmen, Lord Clive, thought that the Bengal provinces and the circars, together with a moderate tract of land round Madras,* and the island of Salsette, near Bombay, were fully equal to the measure of good policy, and to our powers of keeping poſſeſſion. Nor have his succeſsors *acted* otherwise: for our wars since his time have not been wars of conquest for ourselves; though erroneously represented as such. The late war in India may convince such persons, as require conviction on the subject, that conquests made either on Tippoo, or the Mahrattas, could not be preserved with such an army as the revenues of the conquered tracts would support. We got poſſeſſion of Bengal and the circars, under circumstances particularly favourable: such as may never occur again.

The Bengal provinces which have been in our actual poſſeſſion near 23 years (that is, from the year 1765, to the present, 1788), have, during that whole period, enjoyed a greater share of tranquillity than any other part of India; or indeed, than those provinces had ever experienced since the days of Aurungzebe. During the above period of 23 years, no foreign enemy has made any incursion into any part of them, nor has any rebellion happened in any of the provinces (the very inconsiderable one of the zemindar of Jungleterry, in 1774, excepted).† Previous to the establishment of our influence, invaſions were frequent, particularly by the Mahrattas: and one province or other was ever in rebellion; owing to a want of energy in the ruling power; an ill paid,

* That is, the Carnatic being already the property of another. No one can doubt but that it would be more for our advantage to have the largest part of the Carnatic in our own hands, than in those of Mahomed Ally; although the whole revenue of it should be laid out in its defence. But the Carnatic is our weak side, in more respects than one.

† The province of Benares, in which a rebellion happened in 1781, is distinct from the Bengal provinces. It was ceded to the British, as has been observed above, in 1775.

and mutinous army; or an excefs of delegated power. Thofe who know what miferies are brought on a country by its being the feat of war, will know how to appreciate the value of fuch a blefsing, as that of having the horrors of war removed to a diftance from our habitations. There are, doubtlefs, evils that are infeparable from the condition of a tributary ftate, where the fupreme ruling power refides at the diftance of half the circumference of the globe: but thefe are, I hope, amply balanced by the advantages of military protection: and it is a fact not to be controverted, that the Bengal provinces have a better government, and are in a better ftate, as to agriculture and manufactures, than any other of the Afiatic countries, China alone excepted. But this ftate is doubtlefs very fusceptible of improvement, even under a defpotic government: though it unfortunately happens, that the grand object for which the Bengal provinces are held, militates againft the eafe and happinefs of their inhabitants: for there can be no inducement to increafe a national income for the purpofe of finally enriching another nation.

The ftate into which Hindoostan has fallen fince the downfall of the Mogul empire, is materially different from what it was before it was united under the Mahomedan conquerors. It was then parcelled out into feveral moderate kingdoms, which appear to have preferved a degree of balance among themfelves: but now, Hindoostan and the Deccan may be faid to confift of fix principal ftates, which hold as tributaries, or feudatories, all the inferior ones; of which there are many. The reader will not be at a lofs to know that the two Mahratta ftates, the Nizam, Tippoo, the Seiks, and the Britifh, are thofe I mean: for whatever verbal diftinctions may be made, a compulfive alliance is at leaft a dependant, if not in fact, a tributary fituation.

I have ran over the events of the late war in India, with a brevity which may probably be deemed cenfurable, confidering their importance and variety. But I reflected that the accounts of thofe

events are in every body's hands; and that every day produces some fresh matter, illustrative of them. The history of events that have happened, and that have also been recorded, in our own times, may be referred to, by the aid of memory; their connexion or dependency traced; and their chronology ascertained: but it was neceſsary to bring the events of a remoter period more within the view of the reader; the public records of those times being leſs copious, as the scenes recorded were leſs interesting to public curiosity.

GEOGRAPHICAL DIVISION *of* HINDOOSTAN, *into* PROVINCES *or* STATES.

THE following account is divided into two parts: the first of which, contains the provincial division of the empire under the Moguls, so far as the particulars have come to my knowledge; the other contains the present division of it, into independent states, of very unequal extent and power. It will not be expected that the revenues or military force of those states, should be, in general, well ascertained; or that the exact relation in which many of the inferior provinces stand, to the more powerful ones in their neighbourhood, should be correctly known: since the knowledge requisite for such a detail, can only be collected from persons who have had opportunities either of making the proper inquiries on the spot, or of consulting such documents as have received the sanction of authority. In some instances, it has been found impoſsible to resort to authorities of this kind: as there are large tracts within this widely extended country, which no European of character (as far as I have heard) has visited, of late years. To this may be added, that the changes are so frequent, that the progreſs of inquiry and information would scarcely keep pace with them, throughout the whole region.

Acbar's Division *of* Hindoostan.

I Shall not attempt to trace the various fluctuations of boundary that took place in this empire, since the æra of the Mahomedan conquests, according as the seat of government was removed from Ghizni to Lahore, to Delhi, or to Agra, as suited the politics of the times. It is sufficient for my purpose that I have already impreſsed on the mind of the reader, an idea that the provinces of Hindoostan proper have seldom continued under one head, during a period of twenty succeſsive years, from the earliest history, down to the reign of Acbar, in the 16th century: and that Malwa, Agimere, Guzerat, Bengal, &c. were in turn independent; and that sometimes the empire of Delhi was confined within the proper limits of the province of that name.

During the long reign of Acbar in the 16th century, the internal regulation of the empire was much attended to. Inquiries were set on foot, by which the revenue, population, produce, religion, arts, and commerce of each individual district, were ascertained, as well as its extent and relative position. Many of these interesting and useful particulars, were, by Abul Fazil, collected into a book called the Ayin Acbaree,* or Institutes of Acbar; and which, to this day, forms an authentic register of these matters. Acbar began by dividing Hindoostan proper into eleven soubahs† or provinces, some of which were in extent equal to large

* It is with pleasure I inform the reader, that an English translation of the whole Ayin Acbaree has been made, and published in Bengal, by Mr. Gladwin; and was begun under the patronage of Mr. Hastings; to whose munificence, and attention to useful literature, the world will be indebted for the means of acceſs to a most valuable repository of intelligence respecting the former state of Hindoostan.

An account of the contents of the Ayin Acbaree, will be found at the end of Mr. Fraser's History of Nadir Shah.——*Catalogue of Oriental MSS.* page 12.

† It is probable that Acbar might have changed the boundaries of some of the old soubahs, by adding or taking away certain circars, by way of rendering each province more compact, and the provincial capital more centrical to the several parts of it.

European kingdoms. The soubahs were again divided into *circars*, and these sub-divided into *purgunnahs*. If I was to apply English names to these divisions, I should style them kingdoms (or vice-royalties), counties, and hundreds.* The names of the eleven soubahs were Lahore, Moultan (including Sindy), Agimere, Delhi, Agra, Oude, Allahabad,† Bahar, Bengal, Malwa, and Guzerat.‡ A 12th soubah, that is, Cabul, was formed out of the countries contiguous to the western sources of the Indus, and included Candahar and Ghizni; and three new ones were erected out of the conquests in the Deccan: viz. Berar, Candeish, and Amednagur; in all fifteen.

A slight inspection of the map will afford more information respecting the relative position of these soubahs to each other, and to the adjacent countries, than whole sheets of writing. It may be neceſsary, however, to make a few remarks on the boundaries of those soubahs that bordered on the Deccan, in order to understand the extent of the new conquests.

Guzerat, then, extended southward to Damaun, where it touched on the district of Baglana, a division of Amednagur.

Malwa extended to the south of the Nerbudda river; and an angle of it touched on Baglana and Candeish on the south-west and south, and on Berar on the east. The Nerbudda formed the rest of the southern boundary of Malwa, and also of Allahabad. The government of Bengal extended to Cattack|| and along the river Mahanuddy; but the soubah of Oriſsa appears not to have been formed at that time.

Of the newly erected soubahs in the Deccan, Candeish§ the smallest of them, occupies the space between Malwa on the north, Berar on the east, and Amednagur on the west and south.

* Few circars are of leſs extent than the largest English counties.

† Called also Illahabad.

‡ Guzerat is by some of the Hindoos considered as lying without the limits of Hindoostan, Vide Berar Rajah's letters.

|| Called also Cuttack.

§ Named by Acbar, DANDEISH, in honour of Prince Danial; but at present it bears its *old* name.

Berar, according to the present definition, has Allahabad and Malwa on the north; Candeish and Amednagur on the west; Tellingana and Golconda on the south; and Orifsa on the east. I apprehend that only the western parts of Berar were reduced by Acbar.

Amednagur,* the southmost of Acbar's soubahs, had Candeish and Malwa on the north; the Gatte, or Balagat mountains on the west; Bejapour (or Visiapour) and Tellingana on the south; and Berar on the east. The limits of this soubah (Amednagur) are not defined in the Ayin Acbaree; and as Acbar had wars in the Deccan during almost his whole reign, it may be supposed that its limits were perpetually fluctuating.

Tellingana, which in the Ayin Acbaree is called a circar of Berar, was pofsefsed only in part by Acbar. Tellingana, of which Warangole † was the capital, comprehended the tract lying between the Kistna and Godavery rivers, and east of Visiapour (answering to the modern province of Golconda): and was probably in more early times, an extensive kingdom; as the Tellinga language is said to be in use, at present, from the river Pennar in the Carnatic, to Orifsa, along the coast; and inland to a very considerable distance.

Thus we have a standard for the geographical division of Hindoostan proper, in the time of Acbar; but for the Deccan in general, no authority on record has ever come to my knowledge. It appears that Acbar reduced the western side of it, as far down as the 18th degree of north latitude: and under his succefsors, the remainder of it, together with the peninsula, as we have already seen, was either entirely subjected, or rendered tributary to the throne of Delhi (the mountainous tracts held by the Mahrattas,

* The capital of this soubah being originally established at the city of Amednagur, it gave name to the whole province, but the name of the fortrefs of Dowlatabad has in turn superseded it. In like manner the name of Tellingana has now given way to that of Golconda.

† Called Arinkill by Perishta. The rampart of this place can still be traced, and shews that it must have been a place of vast extent.

excepted), and formed into one government under the name of the DECCAN;* which name, in its most extensive signification, includes the whole peninsula south of Hindoostan proper. However, in its ordinary acceptation, it means only the countries situated between Hindoostan proper, the Carnatic, and Orifsa; that is, the provinces of Candeish, Amednagur, Visiapour, Golconda, and the western part of Berar. When the Mogul empire was extended to its utmost limits, by the addition of this vast province, its annual revenue exceeded 32 millions of pounds sterling: † and to enable the reader to make a just estimation of its absolute value, it is necessary to repeat, that the products of the earth are about four times as cheap in Hindoostan, as in England.

* I do not mean to insinuate that the country in question *first* obtained its name of DECCAN, under the succefsors of Acbar: on the contrary, it has been so distinguished from the earliest times. It signifies the SOUTH; as POORUB does the EAST, when applied to Bengal and its dependencies.

† Mr. Fraser, in his Life of Nadir Shah, states the revenues of the provinces under Aurungzebe, as follows:

	Lacks of Rupees.		Lacks of Rupees.
Delhi	305¼	Orifsa	36
Agra	286¾	Cabul, and Cashmere	97½
Agimere	163	Malwa	101
Moultan	54	Guzerat	152
Sindy	23	Berar	153½
Lahore, or Panjab	206¼	Candeish	112
Oude	80½	Dowlatabad, or Amednagur	259
Allahabad	114	Beder	93½
Bengal*	131	Hydrabad, or Golconda	278½
Bahar	101½	Visiapour	269½

TOTAL—30 crores, 18 lacks of Sicca rupees, or about 32 millions of pounds sterling.

* Bengal is rated in the Ayin Acbaree (towards the clofe of the 16th century) at 149½ lacks; in Sujah Cawn's nabobship, A. D. 1727, at 142½; and in 1778, at 197 lacks, net revenue.

Present Division of Hindoostan.

Having given this very general idea of the original division of India, I shall next endeavour to convey an idea of the present division of it, as far as respects the principal states, or the powers that have appeared on the political theatre, since the establishment of the British influence.

The British nation poſſeſs, in full sovereignty, the whole soubah of Bengal, and the greatest part of Bahar; I say *the greatest part*, because it appears that there are several purgunnahs on the south-west of Little Nagpour, that were formerly claſsed as belonging to Bahar, but are now in the poſſeſsion of the Mahrattas.* In Oriſsa, they poſſeſs only the districts of Midnapour, the rest being entirely in the hands of the Mahrattas and their tributaries. These poſſeſsions contain about 150,000 square British miles of land; to which, if we add the district of Benares, the whole will be 162,000;† that is, 30,000 more than are contained in Great Britain and Ireland: and near eleven millions of inha-

* This circumstance was ascertained by the late Colonel Camac.

† The following is an account of (nearly) the quantity of land contained in the countries subject to the British government, and to the British allies, in Hindoostan.

British Possessions.		
Bengal, Bahar, and part of Oriſsa	149,217	
Benares, &c.	12,761	
Northern Circars	17,508	
Jaghire in the Carnatic	2,436	
Bombay and Salsette	200	Square British miles.
		182,122
British Allies.		
Oude, Allahabad, and Corah	33,770	
Rohilcund, and Fyzoolah Cawn's	11,036	
Doo-Ab	8,480	
		53,286
Carnatic in general	41,650	
Tanjore	4,350	
		46,000
Total		281,408

bitants. The total net revenue, including Benares, is at present about 287 lacks of Sicca rupees, which may be reckoned equal to 3,050,000. In this calculation, every branch of the revenue is included; such as the profits arising from salt and opium, the customs, &c.: and the amount of the charges attending the collection of the revenues, and the stipend to the Nabob of Bengal, &c. are deducted: the whole amount of the gross revenue being 3,790,000l. The subsidy from the Nabob of Oude is not taken into this account.*

* The following is nearly the state of the Company's receipts and disbursements at the present time, reduced to sterling money: the Sicca rupee being valued at 2s. 1¼d.

	£.		
BENGAL.			
Land revenue of Bengal and Bahar, 1786	2,800,000		
Benares revenue, clear	380,000		
Oude subsidy	420,000		
Customs, mint, &c. clear of charges	120,000		
Salt revenue, ditto	430,000		
Opium	60,000		
		4,210,000	
Deduct charges of collection of the revenues of Bengal and Bahar, nabob's stipend, &c.	740,000		
Military charges on the Company's, and on the nabob's account	1,410,000		
Civil establishment, marine, and fortifications	390,000		
		2,540,000	Net revenue.
			1,670,000
MADRAS.			
Land revenue, the northern Circars included	725,000		
Carnatic subsidy	160,000		
Tanjore ditto	160,000		
Customs, &c.	25,000		
		1,070,000	
Deduct military charges on the Company's and nabob's account	770,000		
Charges of collecting the revenues	85,000		
Civil establishment, fortifications, &c.	130,000		
		985,000	
			85,000
Total net revenue at Bengal and Madras			1,755,000
At Bombay the disbursements exceed the receipts, by about	300,000		
And at Bencoolen (on the island of Sumatra) the annual charges are about	50,000		
			350,000
Total of net revenue in India			£ 1,405,000

It appears that the aggregate sum of the territorial revenue of the East-India Company,

The natural situation of Bengal is singularly happy with respect to security from the attacks of foreign enemies. On the north and east it has no warlike neighbours; and has, moreover, a formidable barrier of mountains, rivers, or extensive wastes, towards those quarters, should such an enemy start up. On the south is a sea-coast, guarded by shallows and impenetrable woods, and with only one port (and even that of difficult acceſs), in an extent of three hundred miles. It is on the west only, that any enemy is to be apprehended, and even there the natural barrier is strong; and with its population and resources, aided by the usual proportion of British troops,* in addition to the Sepoy establishment, Bengal might bid defiance to all that part of Hindoostan, which might find itself inclined to become its enemy. Even in case of invasions, the country beyond the Ganges would be exempt from the ravages of war, and furnish supplies for the general defence. But, with the whole revenue in our poſſeſsion, the seat of war will probably be left to our own choice.

The late Nabob of Oude, Sujah Dowlah, poſſeſsed, at the time when he first became an ally of the East-India Company, the whole soubah of Oude, and the greatest part of Allahabad; to which, in 1774, were added the eastern parts of Delhi and Agra, till that time poſſeſsed by a tribe of Afghan Rohillas, and by the Jats. The zemindary of Benares, which includes also the circars of Gazypour and Chunar, constituted a part of the dominions of

together with the customs, salt, &c. is equal to 4,640,000l. per annum. The subsidies from the Nabobs of Oude, and the Carnatic; and the Rajah of Tanjore, are, of course, not included in this sum. The Company's military establishment in India, in time of peace, is about 10,000 Europeans, and 52,000 regular Sepoy infantry. It appears also, that the sum total of the sales of East-India and China merchandise, imported into this kingdom in one year, has amounted to five millions and a quarter sterling. Considering the magnitude of the sums, in the above statement, one is led to suppose that such an *imperium in imperio*, as the English East-India Company, never before existed: or, at least, never was created, without much greater assistance from the collective strength and resources of the state, in which it was comprised, than this Company has ever received.

* It may appear paradoxical to some persons, but I am really of opinion that it is poſsible to have too great a proportion of European troops, to Sepoys, in our Indian settlements.

Oude until the year 1775, when its tribute or quit rent of twenty-four lacks (since increased to forty), was transferred to the English. This zemindary, which was lately in the hands of Cheet Sing, occupies the principal part of the space between Bahar and Oude, so that only a small part of the territory of the latter, touches Bahar on the north-west.

The dominions of Oude lie on both sides of the Ganges, occupying (with the exception of Fizoola Cawn's district of Rampour) all the flat country between that river and the northern mountains, as well as the principal part of that fertile tract lying between the Ganges and Jumnah, known by the name of Dooab,* to within forty miles of the city of Delhi. In short, the British nation, with their allies and tributaries, occupy the whole navigable course of the Ganges, from its entry on the plains, to the sea; which, by its winding course, is more than 1350 British miles.

The dimensions of Oude, and its dependencies may be reckoned 360 British miles in length from east to west, and in breadth from 150 to 180: and their area is about one-third part of that of the Bengal provinces; being to each other in the proportion of 53 to 162. Generally speaking, the whole territory is one continued plain; and is a continuation of that extensive level valley through which the Ganges, and its branches, take their course. It is, moreover, the central part of the ancient kingdom or empire of the Prasii. The capital city is Lucknow, situated on the river Goomty; and about 650 miles from Calcutta.

The present Nabob of Oude, Azuph Dowlah, succeeded his father, Sujah Dowlah, in 1775. He is in alliance with the British power; and a brigade of the Bengal army is constantly stationed on his western frontier: thereby answering the purposes of covering Oude as well as Bengal; and of keeping the western

* Dooab, or Doabah, signifies a tract of land formed by the approximation and junction of two rivers: that formed by the Ganges and Jumnah rivers is called by way of eminence The Dooab.

states in awe. It is advanced about 100 miles beyond Lucknow. The whole expence of it is paid by the Nabob of Oude, by a stipulated sum, under the name of a subsidy. [See note, page cxiv.]

The groſs revenues of the dominions of Oude are reckoned to be about two millions and a half sterling: of which the new acquisitions of Rohilcund, Corah, and other parts of the Dooab, are more than one million. The military establishment, including the troops employed in the collection of the revenues, is from 50 to 60 thousand men: but very few indeed of these, deserve the name of regular troops.

Fizoolah Cawn, a Rohilla chief, poſseſses the district of Rampour, situated at the foot of the northern mountains: and although included in Rohilcund, yet this territory was secured to him by the treaty of Loldong, in 1774. It is valued at 30 lacks of rupees* per annum: but he is in effect tributary to Oude, by being bound to furnish his quota towards an establishment for the common defence.

Contiguous to the western bank of the Ganges, and surrounded by the dominions of Oude, is a small district belonging to a chief of the Patan Rohilla tribe. It is generally denominated from its capital town, Furruckabad: and is little more than 30 miles in extent.

On the south-west side of the Jumnah, and separated from it by a narrow tract of low country, is the territory named Bundela, or Bundelcund, inhabited by a tribe of Rajpoots, but deemed inferior to their brethren of Agimere. Bundelcund is surrounded by the dominions of Oude, Benares, and the Mahrattas: and was formerly subject to a rajah of the name of Hindooput: but is now chiefly divided among his sons, or their descendants. It is a mountainous tract of more than 100 miles square: and contains the

* The reader may with ease reduce any sum in rupees, to sterling, by calculating roundly, at the rate of a lack of rupees to ten thousand pounds.

celebrated diamond mines of Panna,* or Purna, together with some strong fortreſses; among which, Callinger is the principal. It is subject to the depredations of the Mahrattas: and has of late years been attempted by Madajee Sindia; who, however, could not make himself master of the principal fortreſses; and in consequence abandoned the open country. The ancient limits of Bundelcund were much more extensive than the present; extending much further towards the Nerbudda river. Chatterpour is reckoned the capital.

The territories of Adjidsing are contiguous to Bundelcund, on the west; to the Mahrattas on the south, and south-west; and to the Benares territory on the east. Their whole extent, including some tributary zemindars on the south-east, may be about equal to Bundelcund: and, like that, subject to the occasional depredations of the Mahrattas. Rewah, or Rooah, is reckoned the capital; and lies on the great road between Benares and Nagpour. We know but little concerning the geography of the remote parts of this tract: nor are the boundaries well defined. The river Soane flows through it, in its course to the Bahar province.

Shah Aulum, the nominal emperor, or Great Mogul, of whom we have fully spoken in the historical part of this Introduction, is now a mere pensioner in the hands of Madajee Sindia: who, notwithstanding, appoints him a residence at Delhi.

The Jats, Jates, or Jetes, were a tribe of Hindoos, who long since the death of Aurungzebe, erected a state in the provinces of Agra and Delhi. They at last fixed their capital at the city of Agra; and appear to have poſsesſsed a tract of country, along both sides of the Jumnah river, from the neighbourhood of Gwalior, to that of Delhi; in length about 160 miles, and 60 broad. Col. Dow, in 1770, estimated their revenue (perhaps extravagantly) at 200 lacks of rupees; and their force at 60 or 70,000 men. This

* Ptolemy's *Panaſsa*, seems to be meant for Panna.

nation is traced by P. Wendell from the countries lying between the S E confines of Moultan and Gohud. It is certain that Tamerlane made war on a people called the *Getes*, in his march from Batnir to Semanah. Nudjuff Cawn, about 14 years ago, dispossefsed the Jats of all their country, save the very confined territory of Bhartpour. Madajee Sindia has, in turn, stripped Nudjuff Cawn's succefsors of these conquests; which are now scarcely worth pofsefsing, although 20 or 21 years ago, under Soorage Mull, they ranked amongst the most flourishing provinces of Hindoostan. It will be perceived that the Jats no longer exist, as a nation: all that remains to Runjet Sing, the son of Soorage Mull, being the fort of Bhartpour, or Burratpour, situated about 45 miles on the west of Agra, with a small territory of 4 or 5 lacks of rupees. The Rajah of Gohud is of the Jat tribe, but unconnected with Runjet Sing.

The late Nudjuff Cawn, whom we have just mentioned, is an instance, among others, of the very sudden rise and fall of the modern states of Hindoostan. From the condition of a minor jaghiredar, and the commander in chief of the imperial army, after the return of the present Mogul, to Delhi, in 1771; he became, in the course of 7 or 8 years, the pofsefsor of a domain, yielding 150 lacks of rupees annually; and kept up an establishment of 80,000 troops of all denominations; in which were included 23 regular battalions of Sepoys. His conquests were on the Jats, the Rajah of Jyenagur, and the Rajah of Macherry (which last had reduced a considerable part of the Mewat); and in 1774, he became pofsefsed of the city of Agra. No vestige of this greatnefs has remained for several years past. His empire, in a manner, died with him: and Madajee Sindia pofsefses most of it at this time. This brings us to the subject of MEWAT, which is the hilly and woody tract lying on the S W of Delhi, and on the west of Agra; confining the low country along the western side of the Jumnah river, to a (comparatively) narrow slip, and extending westwards,

about 130 B. miles. In length from north to south, it may be 90 miles. This tract is remarkable, in that, although it is situated in the heart of the empire of Hindoostan; that is, within 25 miles of its former capital, Delhi, its inhabitants have ever been characterized as the most savage and brutal: and their chief employment, robbery and plundering. We have mentioned in page xlix, the severities practised on them in the 13th century. At the present time, Mewat is so famous a nursery for thieves and robbers, that parties of *Mewatti* are taken into pay by the chiefs of upper Hindoostan, for the purpose of distreſsing the countries which are made the seat of warfare. In Acbar's division, this tract made a part of each of the soubahs of Delhi and Agra: but most of it was included in the latter. Mewat contains some strong fortreſses, on steep, or inacceſsible hills; among which is Alwar, or Alvar, the citadel of the Macherry Rajah. It has changed masters very often, during the contests between its native rajahs (or kanzadeh), and the Jats, the Rajah of Joinagur, Nudjuff Cawn, and Madajee Sindia; and between these powers succeſsively. Sindia has made a considerable progreſs in the reduction of it.

Bordering on the north of Mewat, and approaching with its eastern limit within 24 miles of Delhi, is a tract 80 or 90 miles in length, and from 30 to 40 broad, named Little Ballogistan: its ancient Hindoo name was Nardeck. Within the present century, and most probably since the rapid decline of the Mogul empire, this territory was seized on by the Balloges, or Balloches; whose proper country adjoins to the western bank of the Indus, opposite to Moultan. Some tribes of them are also found in Makran. They are represented as a most savage and cruel race; and appear to be very proper neighbours for the Mewatti. Their territory is full of ravines, and of course difficult of acceſs to invaders: it has, however, undergone the fate of its neighbours, and been succeſsively tributary to the Rohilla chief, Nidjib Dowlah; to the Jats, and Nudjuff Cawn. Westward, it borders on the Seiks.

The territory poſſeſſed originally by Nidjib Dowlah, an Afghan Rohilla (whom we have formerly noticed, as guardian to the young emperor of Abdalla's setting up, in 1761*) is, in part, in the poſſeſſion of his grandson Golam Cawdir; his son Zabeta Cawn dying in the end of 1784, or beginning of 1785. This territory occupies the head of the Dooab, or that part which borders on the Sewalick mountains. It composed chiefly the circar of Sehaurunpour, in Acbar's division of the empire; and does not exceed 100 B. miles in length, from east to west, by 75 in breadth. The original poſſeſſions of Nidjib Dowlah comprehended also the country of Sirhind, on the west of the Jumnah river; and also the districts round the city of Delhi: but the Seiks have not only encroached on the west, and poſſeſſed that shore of the Jumnah, but commit depredations in Sehaurunpour, and even to the banks of the Ganges. Sindia having also encroached on the south, it is highly probable that this tract will not long form a distinct state or principality.

The Seiks may be reckoned the most western nation of Hindoostan; for the King of Candahar poſſeſſes but an inconsiderable extent of territory, on the east of the Indus. Their progreſs as a nation has been slightly mentioned in pages lxiv and lxvi: and since the complete downfall of the Mogul empire, they have acquired very extensive domains. But their power ought not to be estimated, in the exact proportion to the extent of their poſſeſſions, since they do not form one entire state; but a number of small ones, independent of each other, in their internal government, and only connected by a federal union. They have extended their territories on the south-east, that is, into the province of Delhi, very rapidly of late years; and perhaps, the zemindars of that country may have found it convenient to place themselves under the protection of the Seiks, in order to avoid the more oppreſsive government of their

* Nidjib Dowlah, who was an *eleve* of the famous Gazi o'dien Cawn, died in the year 1770.

former masters. Certain it is that the eastern boundary of the Seiks' dominions, has been advanced to the banks of the Jumnah river, above Delhi; and to the neighbourhood of that city: we have just observed, that the adjoining territory of Sehaurunpour, is subject to their depredations, if not actually tributary to them: and that they make excursions to the very side of the Ganges. On the south, they are bounded by the northern extreme of the sandy desert of Registan, and on the SW their boundary meets that of Sindy, or Tatta, at the city of Behker, or Bhakor, on the Indus. On the west, the Indus is their general boundary, as high up as the city of Attock; near to which begin the territories of the King of Candahar: and their northern boundary is the chain of mountains that lie towards Thibet, and Cashmere. This being the case, they will be found to poſſeſs the whole soubah or province of Lahore, the principal part of Moultan, and the western part of Delhi: the dimensions of which tract are about 400 B. miles from NW to SE: and from 150 to 200 broad, in general: although in the part between Attock and Behker (that is, along the Indus) the extent cannot be leſs than 320. Their capital city is Lahore. We know but little concerning the state of their government and politics: but the former is represented as being mild. In their mode of making war they are unquestionably savage and cruel. Their army consists almost entirely of horse, of which they are said to be able to bring at least 100,000 into the field. It is fortunate that the Oude dominions have the Ganges for a barrier between them and this army of plunderers. Abdalla was accustomed to paſs through the country of the Seiks, during his visits to Delhi, as late as the years 1760 and 1761: and indeed meditated the conquest of it: but it is probable, that with the present strength of the Seiks, no king of Candahar will again attempt either the one or the other. It was lately reported that the Seiks were in amity with Timur Shah of Candahar, and meant to allow his army a paſsage through their territories. This, however, appears highly improbable:

the progrefs of an Indian army effecting nearly an equal degree of desolation, whether it enters a country on terms of hostility, or of amity.

Timur Shah (the succefsor of Ahmed Abdalla, late King of Candahar, Korasan, &c. who died about the year 1773) pofsefses in Hindoostan, nothing more than the country of Cashmere, and some inconsiderable districts contiguous to the eastern bank of the Indus, above the city of Attock. We have spoken of the extent of the kingdom of Candahar, in Sect. III. of the Memoir: and it may be proper to add, in this place, that the founder of that kingdom, the above-mentioned Ahmed Abdalla, was originally the prince, or chief, of an Afghan tribe, named Abdal (whence the term *Abdalli*), and that he was stripped of his country by Nadir Shah, and compelled to join the Persian army, in 1739. On the death of Nadir, he suddenly appeared among his former subjects, and in a short time erected for himself a considerable kingdom in the eastern part of Persia: adding to it, most of the Indian provinces ceded by the Mogul to Nadir Shah. It has been aferted, that Abdalla had arisen to a high command in the Persian army; and that his department, of course, occasioning a large sum of money to centre with him; he, on the death of Nadir Shah, availed himself of the use of these treasures, to carry off a part of the army. He established his capital at Cabul, near the hither foot of the Indian Caucasus: and it appears by the accounts of Mr. Forster, who traversed the country of Timur Shah, in 1783, that his subjects live under an easy government: that is, for an Asiatic one. The revenues and military force of Candahar, have not come to my knowledge. The military establishment *has* been given at 200,000 men. Ahmed Abdalla had regular infantry, cloathed like the British Sepoys: and, at one time, made use of the British manufactures for that purpose: the trade went by Sindy, and up the Indus, and its branches, to Cabul. This trade has long been at an end.

The province of Sindy, or that lying on both sides of the lower part of the river Indus,* is subject to a Mahomedan prince, who is tributary to the King of Candahar; it being among the provinces ceded to Nadir Shah, by Mahomed Shah, in 1739. Although it properly belongs to Hindoostan, it is so detached from it by the great sandy desert, that it takes no part in its politics. This province is described in Sect. III. to which the reader is referred.

The province of Cutch, on the SE side of Sindy, as well as the western parts of the peninsula of Guzerat, are governed by rajahs of their own: and do not appear to have undergone much change, by the late revolutions in Hindoostan. Cutch is not only a barren country, but in its nature too strong to be easily attacked. And the western part of Guzerat is mountainous and woody; and inhabited by a wild, hardy race: and therefore, on both accounts, unfavourable to the progreſs of a Mahratta army.

The Mahrattas, as has been observed before, form two distinct empires, or states; that of Poonah, or the western; and Berar, the eastern. These states, collectively, occupy all the southern part of Hindoostan proper; together with a large proportion of the Deccan. Malwa, Oriſsa, Candeish, and Visiapour; the principal parts of Berar, Guzerat, and Agimere; and a small part of Dowlatabad, Agra, and Allahabad, are comprized within their extensive empire; which extends from sea to sea, acroſs the widest part of the peninsula; and from the confines of Agra northward, to the Kistna southward; forming a tract of about 1000 British miles long, by 700 wide.

The western state is divided among a number of chiefs, or princes, whose obedience to the paishwah, or head, is, like that of

* The celebrated Sir William Jones very ingeniously remarks, that "it is usual with the "Asiatics to give the same name to the countries which lie on both sides of any considerable "river." Thus the province of Sindy is divided by the Indus; Bengal by the Ganges; and Pegu by the Irabatty. Egypt, in like manner, is divided by the Nile. Probably, the facility of acceſs to either side, by means of a navigable river, and an occasional inundation, subjected each of the divisions, formed by the course of the river, to the constant depredations of its opposite neighbour; till neceſsity produced a compromise, which ended in joining them in one community.

the German princes to the emperor, merely nominal at any time; and, in some cases, an opposition of interests begets wars, not only between the members of the empire themselves, but also between the members and the head. In fact, they are seldom confederated but on occasions that would unite the most discordant states; that is, *for their mutual defence*: for few occasions of foreign conquests, or plunder, are of magnitude enough to induce them to unite their armies.

Was I inclined, I want ability, to particularize the poſſeſſions and situations of all the chiefs that compose this Mahratta state. I shall therefore attempt only to mention the principal ones, commonly styled *jaghiredars*, or holders of *jaghires*:* their titles to their poſſeſſions, being nominally during their life time only; although they have long since become hereditary.

The paishwah, or nominal head of the western empire, resides at Poonah, which is situated at the south-west extreme of the empire, and about 100 miles from Bombay. There are three principal jaghiredars on the north of Poonah; and two on the south: the first are, Madajee Sindia, Tuckajee Holkar, and Futty Sing Gwicuar; and the latter, Purseram Bow, and Rastah, who is more commonly styled the Meritch *Wallah* (or Meritch man) from his having established his capital at that city,† previous to the conquest of it, by Hyder Ally. Before I proceed to particularize the different partners, or sharers, in the several provinces, it will

* Jaghire, means a grant of land from a sovereign to a subject, revokable at pleasure; but generally, or almost always, for a life rent.

† The exact geographical position of this important fortreſs and city, is not ascertained; but it is with great reason supposed to be the same with Mirje, or Merdji, of Mandeloe's route, drawn by P. du Val: which is situated near the north bank of the Kistna river, about 70 road miles S W from Visiapour; and 130 from Poonah. It is also, most unquestionably, the same place with Merrick; a place of consequence in Aurungzebe's wars with Sambajee. In the Select Committee's reports, it is named indifferently, Merrick and Meritz. It may be collected from those reports, and from Mr. Orme's Historical Fragments, that this place is situated on the north bank of the Kistna; on the N W of Sanore-Bancapour, and on the S W of Visiapour; and its distance from the former ought to be very considerable, for part of the circars of Nourgal, Azimabad, and Raibaug, intervene between those of Bancapour and Meritz. And this is the case with Mirje on the map, which is about 108 G. miles from Bancapour. There is also a fortreſs of great note in Aurungzebe's, and Hyder Ally's wars, named Darwar.

, Since the first edition was printed, the communications made by Capt. Reynolds, of the Bombay establishment, have enabled me to correct this, as well as other parts of the map.

be neceſsary to observe that the Mahratta dominions have in some places, been portioned out among the different chiefs, after a method that appears the most confused and intricate imaginable. For not only the *purgunnahs*, or grand divisions of provinces, are divided, in some instances, among three different powers; but even the revenues of particular villages, are divided in like manner; and in consequence, distinct officers are appointed for the purpose of collecting the respective shares.*

The province or soubah of Malwa (to which this account particularly applies), one of the most extensive, and the most elevated and highly diversified in Hindoostan, is divided among the paishwah, Sindia, and Holkar: as is also the small soubah of Candeish, adjoining to it, on the south; and which contains the fine city of Burhanpour, in the poſseſsion of Sindia.

The province of Agimere, has only in part been poſseſsed by the Mahrattas, and that part is now entirely in Sindia's hands. What is here expreſsed, relates only to what may be termed Agimere *proper*; and not to the whole soubah of that name, according to its geographical definition in the Ayin Acbaree: since the three great Rajpoot principalities, Oudipour, Joodpour, and Joinagur, as well as Rantampour, are there included in it. These Rajpoot principalities (of which more will be said hereafter) have long been held tributary to the Mahrattas; and now, by the ascendancy of Sindia, and by virtue of his local situation, he converts the whole of the tribute to his own use.

The largest, as well as the finest part of Guzerat, is divided between the paishwah, and Futty Sing Gwicuar (or Gwicker), the latter holds his share chiefly in the northern part of it.

The provinces on the south of Poonah, are divided between the paishwah, and the *jagbiredars*, Purseram Bow, and Rastah. So little is known in Europe concerning the geography of this part

* It is probable that this irregular division arose from some accidental circumstances at the time when the conquest was made; and which cannot now be traced: but as it has the appearance of an expedient, calculated to check and restrain the power of the different jaghiredars, it is generally supposed to be the effect of policy and design.

of the country, that the map of it is almost a blank. I am by no means certain where to place the common boundary of the Mahratta and Tippoo's countries, in this quarter. Hyder took poſſeſsion of Meritch (Meritz, or Mirje), on the north bank of the Kistna, in 1778; and, I apprehend, never relinquished it.

The paishwah, or his representatives, poſſeſs also many other districts in the N E, and east, parts of Malwa, &c. for the Poonah territories, or those of his jaghiredars, close on the river Jumnah, opposite to Calpy: and also extend along the northern bank of the Nerbudda river, almost to its source; and encroach deeply on the S W side of Bundelcund, according to its ancient limits. The districts of Sagur, and Mundella, are situated in this quarter. Thus it appears, that the territories subject to Poonah, are separated, or rather insulated, in an extraordinary manner; and this circumstance alone, must influence the domestic as well as the foreign politics of this state: since any considerable jaghiredar may easily withhold the government's share of the revenues, and convert it to his own use.

From what has been said, it will appear impoſsible to discriminate the poſseſsions of the paishwah, any more than those of his jaghiredars, on the map. All that can be done, is to mark the body of each tract of land, in which the paishwah and the particular jaghiredars participate. It is understood that the paishwah poſseſses a larger share in the western part of the Deccan, than elsewhere. This tract is naturally very strong, particularly on the west side towards the sea, where a stupendous wall of mountains, called the Gauts, rises abruptly from the low country, called the Concan (or Cockun), supporting, in the nature of a terrace, a vast extent of fertile and populous plains, which are so much elevated, as to render the air cool and pleasant (see Index, article *Gauts*). This elevated tract is continued not only through the Mahratta territories, but extends through the peninsula, to the southern extreme of Mysore; and is named *Balla-Gaut*,

throughout its whole extent; meaning literally, the *higher*, or *upper Gauts*.* In the peninsula, it is applied in contradistinction to *Payen-Gaut*, or the *lower Gauts*: but in the Deccan, it appears to be used only as a proper name, and not as a correlative: we having never heard of the Deccan, Payen-Gaut.

Nor is it less difficult to ascertain the sum of the revenue of this state, than to particularize the extent of the districts, from whence it is collected. The most intelligent and best informed persons that I have consulted on the occasion, will not venture to give an opinion on it. One person (a native of India) has stated the revenue at 12 crores of rupees, or 12 millions sterling: and the net receipts, jaghires deducted, at five crores. The same account makes the military establishment in the field, to be 200,000 troops, foot and horse; besides an equal number in garrison. Another account of the revenue, by an European gentleman, reckons 7 crores for the net revenue. If the provinces poſſeſſed by this state, were to be rated in the same proportion as in the time of Aurungzebe, the net revenue would be about 8 crores of rupees, or 8 millions sterling.

Sindia is unquestionably the most powerful jaghiredar within this state; and ought to be regarded as a sovereign prince. Since the Mahratta peace (1783), he has extended his frontier from Malwa towards the Jumnah; swallowing up most of the petty states that heretofore existed there: and in particular, that of Gohud, including the celebrated fortreſs of Gwalior (see page 157 of the Memoir). He has also carried his arms northward to Delhi, and into the provinces of Mewat and Jyenagur; reducing many fortreſſes, and a considerable tract of country, which were heretofore succeſsively poſſeſſed by the Jats, and Nudjuff Cawn. In fine, he poſſeſſes the perſon of the nominal Great Mogul, and all that can

* Gaut, or Ghaut, signifies either a paſs through mountains, or a landing-place on the bank of a river. In the former sense, the term has been applied to the Carnatic, which is divided by ridges of mountains, abounding with paſſes and defiles.

be accomplished by virtue of his name. It would appear that Sindia's plans embrace too great a variety of objects at one and the same time: for, not long ago, his troops were compelled to retire from Bundelcund, in which they poſſeſſed most of the open country, the fruits of a very recent conquest. He seems bent on extending his conquests on the north and west: but time alone can discover whether he will succeed in establishing a permanent empire, on that side. The revenue of his paternal, or original dominions, in Malwa, &c. has been estimated at one crore of rupees per annum. It is difficult to ascertain what the value of his new acquisitions are, in their present state: for those portions of Agra, Delhi, &c. which he holds, having been so long subject to the depredations of contending armies, little benefit can be derived from them, at present.* Gohud, one of these acquisitions, is estimated at 20 or 30 lacks per annum. Holkar is supposed to poſſeſs 80 lacks per annum, in his share of Malwa. Sindia's capital city is Ougein, near the ancient city of Mundu, the capital of the Chilligi kings of Malwa: and Holkar's capital is Indore, situated about 30 miles on the west of Ougein.

The Berar or Nagpour rajah, Moodajee Boonslah (or Bonsola) poſſeſſes the principal part of Berar, together with the province of Oriſsa.† The remainder of Berar is held by the Nizam, or Soubah of the Deccan, who pays a *chout*, or fourth part of its clear revenues to Moodajee. On the west and south, the Berar dominions border on, or are intermixed with, those of the Nizam: on the NW and north, are the provinces of Bopal, Gurry-Mundella, &c. tributaries of Poonah; together with the territories of Adjid Sing. On the east, the Nagpour territories thrust themselves between the

* These territories have formerly yielded 3 or 4 crores per annum: but they are now in a state of desolation, which it is impoſsible to form any idea of, without having actually beheld them. A. [This note is by a gentleman, who has been on the spot.] See also page lxxviii.

† Oriſsa, is nominally one of the British provinces, but we have observed in another place, that only a very small part of it is subject to the Bengal government.

British poſſeſſions in Bengal, and those in the northern circars, ſo as to occupy near 180 miles of the country adjacent to the ſea; and of courſe, to break the continuity of their poſſeſſions on the ſea coaſt. Moodajee's dominions are very extenſive, being in length from eaſt to weſt 550 British miles, and in ſome places 200 from north to ſouth. He does not poſſeſs all this in full ſovereignty; for Ruttunpour and Sumbulpour are little more than tributary, and are governed by his brother Bembajee. We know leſs of the interior parts of Berar, than of moſt other countries in Hindoostan; but, by what we do know, it does not appear to be either populous or rich. Nagpour is the preſent capital, and the reſidence of Moodajee; and it is ſituated about midway between Bengal and Bombay.

Cattack, or Cuttack, the capital of Oriſſa, is a poſt of conſequence on the river Mahanuddy, as it lies in the only road between Bengal and the northern circars; and the poſſeſſion of this city and its dependencies, gives the Berar rajah more conſequence in the eyes of the Bengal government, than even his extenſive domain, and centrical poſition in Hindoostan.

Moodajee has been recognized (page lxxxviii) as a deſcendant of the original founder of the Mahratta empire, Sevajee. The ſum of his revenue is variouſly ſtated. Some have reckoned his part of Berar, at 84 lacks of rupees, per annum; and Cattack at 24: while others have allowed only 60, for his whole revenue. If we take it at the higheſt calculation, 108 lacks, he ought not be conſidered in a formidable light, by the Britiſh power. But placing the actual ſum of his income out of the queſtion, his dominions are too widely extended, in proportion to their value, to form a powerful ſtate. Cattack is no leſs than 480 miles from the capital, Nagpour. It has been well obſerved, that the ordinary cauſe of jealouſy between neighbouring ſtates, is done away, in the caſe of Bengal and Berar, by the nature of that part of the Berar dominions, which borders on Bengal; it being generally woody and uninhabited; ſo that the

virtual boundaries of both countries are removed to a distance from each other.

These are the principal of the countries reduced into the form of governments, by the Mahratta chiefs: but so habituated are they to rapine and plunder, that few of the neighbouring states, but have, at one period or other, felt and acknowledged their power. Bengal and Bahar were, for a short time, subjected to a regular tribute; and the Carnatic, Mysore, the Nizam's provinces, the Dooab, Bundelcund, and the southern parts of Delhi, have been frequently over-run. Their predatory excursions sometimes carried them 1200 miles from their capital. But the lofs of the battle of Panniput in 1761, induced a degree of caution in their military enterprizes: and from that period, their power appears to have been on the decline. Shut out of Bengal, Oude, and the Carnatic, by the British arms, and out of Mysore by Hyder's, their field of action has been much circumscribed; and the late war with the British power, discovered their weaknefs to all Hindoostan.

I am not sufficiently informed on the subject, to be able to particularize all the different provinces, or districts, that are tributary to the Mahratta states. Some have been already mentioned; and among others, the Rajpoot principalities of the soubah of Agimere: and which, from their former importance and weight in the internal politics of the Mogul empire, deserve particular notice.

In the early part of the present century, these states, collectively, appeared so formidable to the succefsor of Aurungzebe, that he was constrained to leave them in quiet pofsefsion of their independency; during the sedition of the Seiks, in Lahore (see page lxiv). Vast have been the changes since that time: for what the disciplined armies of Aurungzebe and his sons could not accomplish, has been effected by the Mahratta freebooters: so much easier is it to ruin a country, than to make a conquest of it. The history of the decline of the Rajpoot principalities, is foreign to the present work: it is sufficient to observe, that they are reduced to their present low state,

merely by the depredations of Mahratta detachments; which being composed of light horse, and accustomed to divide into innumerable small parties; they by their rapid and desultory movements, at once spread desolation, and elude the attacks of the inhabitants. This must be understood to relate only to the open parts of Rajpootana: the mountainous parts being yet free from their incursions.

RAJPOOTANA was divided into three great principalities, under the names of Oudipour, Joodpour, and Ambeer (or Amere), now better known by that of Joinagur, or Jyenagur. Oudipour was also named Meywar, or Midwar; and Joodpour, Marwar. In Acbar's division of the empire, these principalities were clafsed as belonging to the soubah of Agimere, which is sometimes called Marwar. It is not an easy task, by means of the geographical matter extant, to afsign the precise limits and dimensions of these principalities; which occupy the space between the western confines of Agra, and the N E part of Guzerat; and between the sandy desert (or Registan) and Malwa: that is an extent of 330 British miles from N E to S W; and 200 broad, in the widest part. Their relative situations, and comparative dimensions, may be seen in the map; where Jyenagur or Jyepour, will be found to lie to the northeast; Oudipour to the S W; and Joodpour to the N W, bordering, angularly, on the other two. Pere Wendell's MS. account of these states, from whence I have extracted many of the above particulars, states the revenues of Oudipour at 10 lacks of rupees, Marwar at 40, and Jyenagur at 40, per annum, in the year 1779.* The two former are very mountainous, with a sandy soil in the valleys: the latter is the most fertile, and was, about the middle of this century, in a high state of improvement, under the government of the celebrated Rajah Jyesing, or Jefsing; who founded the new capital of Jyepour, which has had the effect (not unusual in Hindoostan)

* The whole revenue of the soubah of Agimere, in the time of Acbar, appears to have been only about 75 lacks. Aurungzebe is said to have doubled the land-tax on the Rajpoots: and Agimere is accordingly stated in Mr. Fraser's account, at 163 lacks of rupees.

of changing the name of the province to that of the capital. P. Wendell represents Jyepour as a place of great wealth and commerce in 1779, being the *entrepot* of the principal part of the goods that are brought from every quarter of India. The rajah built also an observatory in his capital, and invited Pere Boudier to it, in 1734. It is feared that the confusions that have so long prevailed in this province, must have greatly reduced the wealth and importance of the capital. We have mentioned before, that Sindia receives the tribute of all the three Rajpoot provinces, and converts it to his own use: and that he had made some considerable conquests in them, particularly in Jyenagur.

It is probable that in early times, the whole Rajpootana constituted one entire kingdom, or empire, under the Rana or Prince of Oudipour, who has in all times, since we had any knowledge of his history, been considered as the head of the Rajpoot states. A long established custom of homage to a temporal prince, from those who do not acknowledge his superiority in any other way, seems to prove the existence of real power in the hands of his ancestors. In modern times the Rana of Oudipour seems to have been considered somewhat in the same light as the general of the Amphyctions was in Greece. Cheitore was the ancient capital of the rana, a place much celebrated for its strength, riches, and antiquity, when it was taken and despoiled by Acbar, in 1567: Oudipour is the present capital.

The Rajpoots are not confined entirely to the tract abovementioned, or even to the soubah of Agimere: since some inferior tribes of them are settled in Bundelcund, and in Gurry-Mundella. Others, according to Thevenot, are settled in Moultan; and indeed, he represents Moultan as the original country of the Kuttries, from whom the Rajpoots sprung (see Index, article *Kuttries*).

Of the countries of Nagore, Bickaneer, Jafselmere, and those bordering on the lower part of the course of the river Puddar, and on the sandy desert, we know little at present, except that they

form a number of petty rajahships; and are understood to be mostly inhabited by Rajpoots.

The Rajpoots are ordinarily divided into two tribes or clafses; those of RATHORE, and CHOHAN, SEESODYA. Marwar, or the N W division of Agimere, is the proper country of the former; and Meywar, or Oudipour, of the latter. The reader will be pleased to obferve, that Cheitore is alfo fynonimous with Oudipour, or Meywar. The Rathore tribe were originally the moft numerous of the two. It has often been afferted, and by the late Col. Dow, among others, that the Mahratta chiefs had their origin from the Rathore tribe: and to countenance this opinion, the etymology of the name Mahratta, has been drawn from RATHORE; prefixing to it, MAHA, or Great. We have feen, however, in page lxxix, that the fact is very different, and refts on the foundation of hiftoric records: the term Mahratta being derived from Marhat, or Marheyt, the name of the province in which Sevajee firft eftablifhed his independency: and this etymology appears to be perfectly natural. And by the fame rule, Sevajee muft have been of the Seesodya tribe, as drawing his lineage from Oudipour; and not of the Rathore tribe, as erroneously represented.

Of the five northern circars, Cicacole, Rajamundry, Ellore, and Condapilly,* are in the poffeffion of the English; and Guntoor is in the hands of the Nizam. The four firft occupy the fea coaft from the Chilka lake on the confines of Cattack, to the northern bank of the Kiftna river; forming, comparatively, a long, narrow flip of country, 350 miles long, and from 20 to 75 wide. The nature of the country is fuch, as to be easily defenfible againft an Indian enemy, it having a barrier of mountains and extenfive forefts on one fide, and the fea on the other; the extremities only being open. Its greateft defect is in point of relative fituation to

* Thefe circars, or provinces, were originally denominated from their pofition in refpect to Madras, on which they depend: and the term *northern circars*, has at length been adopted by the Englifh in general.

Bengal and Madras, it being 350 British miles from the first, and 250 from the latter; so that the troops destined to protect it, cannot be reckoned on for any prefsing service that may arise at either presidency. The circars, in point of strictnefs, appertain partly to Golconda (or the Deccan), and partly to Orifsa; and are held of the Nizam, on condition of paying him a stipulated quit rent. When the French took pofsefsion of the five circars, in 1753, they were valued at about 43 lacks of rupees per annum. The English never pofsefsed Guntoor, which was estimated at near 7 lacks of the above sum: so that 36 lacks (360,000l.) should be taken for the true value of the English pofsefsions in the circars. In 1784, they were reckoned to produce about that sum. It would appear that the Nizam, by retaining Guntoor, has more than an equivalent for the *pesbcusb*, or tribute, which is 5 lacks per annum.

The pofsefsions of the Nizam, or Soubah of the Deccan (a younger son of the famous Nizam-al-Muluck), comprize the province of Golconda, that is, the ancient province of Tellingana, or Tilling, situated between the lower parts of the courses of the Kistna and Godavery rivers, and the principal part of Dowlatabad; together with the western part of Berar, subject (as has been said before) to a tribute of a chout, or fourth part of its net revenue, to the Berar Mahratta. The Nizam has the paishwah, or Poonah Mahratta on the west and north-west: the Berar Mahratta on the north; the northern circars on the east; and the Carnatic, and Hyder Ally on the south. I am not perfectly clear in my idea of his western boundary, which, during his wars with the Mahrattas, was subject to continual fluctuation: but I understand generally that it extends more than 40 miles beyond the city of Aurungabad, westwards; and comes within 80 miles of the city of Poonah: and that on the S W it goes considerably beyond the river Beemah, and to the borders of Sanore-Bancapour. His capital is Hydrabad, or Bagnagur, situated on the Moufsi river, near the famous fortrefs of Golconda.

The districts of Adoni and Rachore, which were in the hands of Bazalet Jung (brother to the Nizam) during his life time, are now in the hands of the Nizam. The Sourapour, or Sollapour rajah, on the west of the Beemah river, together with some other rajahs, are his tributaries.

Probably the Nizam's dominions, including his tributaries and feudatories, are no leſs than 430 miles in length, from N W to S E, by 300 wide. Till he took poſſeſsion of the Guntoor circar in 1780, his dominions no where touched on the sea coast.

The Guntoor circar (called also Mortizanagur and Condavir) occupies the space between Condapilly, the southmost of our four circars, and the northern part of the Carnatic: extending along the sea coast of the bay of Bengal more than 80 miles. The poſſeſsion of this district to the English, would have been extremely eligible, as well for the purpose of shutting out the French nation from the Deccan, as to keep open a communication with the northern circars, and to preserve the continuity of our poſſeſsions, and those of our allies. Although the maritime parts of this circar are flat and open, yet the interior part of it contains some very strong fortreſses, and posts. The Nizam took poſſeſsion of it on the death of his brother Bazalet Jung, and still holds it.

It has not been in my power to obtain, even a tolerably exact account of the sum of the Nizam's revenue; or of his military establishment: the latter, however, is far from being respectable, on the score of discipline. The former has been ever varying, and generally diminishing; by reason of the encroachments of the Poonah Mahrattas, and the Mysoreans: it is said to be reduced so low as 130 lacks of rupees, annually. But besides this sum of actual revenue, it must be taken into the account, that he has depending on him, many jaghiredars, who hold their lands on the tenure of military service.

The dominions of Mahomed Ally, Nabob of the Carnatic,

and an ally of the East-India Company, commence on the south of the Guntoor circar, and extend along the whole coast of Coromandel to Cape Comorin. It must be understood that I mean here to include Tanjore, Marawar, Tritchinopoly, Madura, and Tinevelly; all being appendages of the Carnatic. Under this description, the Carnatic is not lefs than 670 British miles in length from north to south, but no where more than 120 wide, and commonly no more than 75. Such a long, narrow, tract of country, bordered by an active and powerful enemy, whose territories are, moreover, of a compact form, and his force more readily collected, must always be subject to have its distant provinces cut off from its afsistance: or if it divides its force, for their separate defence, the safety of the whole will be endangered.

The Carnatic anciently comprized all that part of the peninsula that lies south of the Gondegama and Tungebadra rivers, from the coast of Coromandel eastward, to the Gaut mountains westward, and was divided into *Balla-Gaut* and *Payen-Gaut*, or the upper and lower Gauts;* the former being the western part, and containing the districts which now compose the country of Tippoo; and the latter, the eastern part, or the Carnatic according to its present definition.

The revenue of the nabob is stated at about a million and a half sterling, per annum: out of which he pays a subsidy of 160,000l. per annum, to the East-India Company towards the expence of their military establishment. The evils attendant on the improvident conduct of the nabob, were severely felt during the late war, and ought to be cautiously guarded against in future.

The British pofsefsions in the Carnatic are confined, chiefly, to the tract called the Jaghire, which extends along the coast, about 108 B. miles, and 47 inland, in the widest part. Its revenue is reckoned 150,000l. Besides the Jaghire, there are lands depen-

* See the term *Gaut*, explained in page cxxviii.

dent on Cuddalore, but the amount is not considerable. The whole amount of the land revenue dependent on Madras, including the circars, has been stated, in page cxiv, at 725,000l. per annum.

The dominions of Tippoo Sultan, who styles himself Regent of Mysore, begin on the west of the ridge of mountains beyond Dalmacherry, Sautgud, and Attore; and extend southward to Travancore and Madura; northward to Soonda and Visiapour (enveloping Adoni, the territory of the late Bazalet Jung) north-eastward to Guntoor and Ongole; and westward to the sea. They comprehend, generally, the provinces of Mysore, Bednore, Coimbettore, Canara and Dindigul; besides his late father's conquests to the northward, which are Meritch, or Meritz, Soonda, Chitteldroog, Harponelly, Sanore-Bancapour, Roydroog, Gooty, Condanore, Canoul, and Cuddapah.

Tippoo's present territory exceeds very considerably, both in extent and revenue, that of his rival the Nabob of Arcot: but probably it will, for some time at least, require a prince of considerable talents, to prevent a state, composed of such discordant parts, from falling to pieces. A descendant of the Hindoo King of Mysore, whom Hyder dethroned, is living; and kept a state prisoner at Seringapatam, Tippoo's capital. He is occasionally shewn to the populace: and the circumstance of his being permitted to live, is a strong proof how much the popular prejudices prevail in favour of the family of their ancient kings. It was part of the plan of operations of the southern army, under Colonel Fullarton, in 1783, to march from Coimbettore to Seringapatam, in order to liberate this prince, and encourage the people of Mysore to throw off their allegiance from Tippoo: and it was the opinion of many sober persons that it might have succeeded, if circumstances had permitted Col. Fullarton to undertake it. The general character of Tippoo, is that of a man of high ambition: with great abilities for war and

finance; cruel, to an extreme degree; and obstinately attached to his schemes. He is unquestionably the most powerful of all the native princes of Hindoostan; but the utter detestation in which he is held by his own subjects, renders it improbable that his reign will be long. His dominions are very extensive; and although the imperfect state of the geography of the western part of the peninsula, does not permit me to mark their northern boundary, yet it is pretty certain that it touches the river Kistna, on the south of the city of Visiapour: and therefore, the extent of Tippoo's territory, or kingdom, from the valley of Ootampaliam on the south, to the Kistna on the north (or rather N N W), cannot be lefs than 550 British miles. In breadth it is very unequal: in the widest place, that is, in the northern part of the peninsula, the breadth is at least 330 miles: but lefs than 150 in the parallel of Tritchinopoly; and further southward, it ends in a point. In page xcvi, its area has been compared to that of Great Britain; which is taken at 96,400 square British miles: and the country of Tippoo is supposed to contain 21 square degrees; which, in the parallel of 14°, produce about 97,650 B. miles. By the peace of 1782, Hyder was to relinquish all, but his *ancient pofsefsions:* how far his succefsor has fulfilled the terms of the treaty, I am not informed: but the term, *ancient pofsefsions,* was too general, or rather too vague, to be understood in any particular sense.

The grofs revenue of Tippoo, has been stated at four crores of rupees, or as many millions sterling. His military establishment is very great; being no lefs than 72,800 regulars, including 740 Europeans, under the command of French officers: beside troops in the frontier garrisons, to the amount of 49,000. The remainder of his force consists of irregulars of various descriptions, and amounts to 33,000, and upwards: so that the whole force of Tippoo, is reckoned 155,000; of which, near 73,000 are of a clafs much superior to any troops that have ever been raised and dis-

ciplined by a native of India.* His desire of extending his kingdom, will keep him at perpetual variance with the Poonah Mahrattas, or the Nizam, or both; as it is only on their side that any acquisitions can be made, without quarreling with the English. Hyder long meditated the conquest of the Travancore territory, situated at the extreme of the peninsula; but was prevented by the English. Tippoo is said to have intentions of the same kind. The reader may easily collect, from a cursory view of the map, how hurtful to the interest of the Carnatic, such a revolution would prove: since it implies also the transfer of the Cochin territories, and all the tract lying on the west of the Gauts.

* I have been favoured with the following particulars, relating to Tippoo Sultan's military establishment; and which may be depended on.

REGULARS.

Cavalry			27,400
Sepoy Infantry, Hindoos and Mahomedans			36,000
Topasses (or Hatmen), that is, the descendants of Portuguese and other Europeans, Infantry			7,300
Europeans, Cavalry	200		
Foot	540		
			740
Artillery Corps, consisting of Europeans, Topasses, &c.			1,390
			72,830
Guns attached to the battalions	110		
Garrisons on the frontiers. Horse		21,000	
Foot		28,000	
		49,000	
Irregulars, armed in various ways	7,000		
Auxiliaries from the Rajahs of Rydroog, Darwar, Harponelly, Sanore, &c.			
Horse	13,300		
Peons (Irregulars)	13,000		
	26,300		

RECAPITULATION.

Regulars	72,830
Garrisons	49,000
Irregulars	7,000
Auxiliaries	26,300
Total	155,130

CHRONOLOGICAL TABLE *of* EMPERORS, *who have reigned in* HINDOOSTAN, *since the* GHIZNIAN CONQUEST.

GHIZNIAN Emperors.

	Began his Reign A. D.
* Mahmood I.	1000
Mahomed I.	1028
Musaood I.	
Modood	1041
Musaood II.	1051
Ali	
Reschid	1052
Feroch-Zaad	
Ibrahim I.	1056
Musaood III.	1098
Arsilla	1115
Byram I.	1118
Chusero I.	1152
Chusero II.	1159

GHORIAN, or GAURIAN Emperor.

Mahomed II, or Mahomed Ghori	1184

PATAN, or AFGHAN Emperors.

Cuttub	1205
Eldoze	1210
Aram	
Altumsh or Iltumsh	
Ferose I.	1235
Sultana Rizia, Empress	1236
Byram II.	1239
Musaood IV.	1242
Mahmood II.	1245
Balin	1265
Keikobad	1286
Ferose II.	1289
Alla I.	1295
Omar	1316
Mubarick I.	1317
Tuglick	1321
Mahomed III.	1325
Ferose III.	1351
Tuglick II.	1388

	Began his Reign A. D.
Mahomed IV.	1389
Abu-Bicker	
†Mahmood III.	1393

Dynasty of the SEIDS.

Chizer	1414
Mubarick II.	1421
Mahomed V.	1433
Alla II.	1447

Dynasty of LODI.

Beloli	1450
Secunder I.	1488
Ibrahim II.	1516

MOGUL, or MUNGUL Emperors.

Baber	1525
Humaioon	1530

Second PATAN Dynasty.

Shere	1542
Sclim	1545
Mahomed VI.	1552
Ibrahim III.	

MOGUL Dynasty restored.

Humaioon	1554
Acbar	1555
Jehanguire	1605
Shah Jehan	1628
Aurungzebe, or Allumguire I.	1659
Bahader Shah	1707
Jehaunder Shah	1712
Feroksere	1713
Ruffieh-ul-Dirjat	1717
Ruffieh-ul-Dowlah	
‡Mahomed Shah	1718
Ahmed Shah	1748
Allumguire II.	1753
Shah Aulum	1760

* He began his reign in Ghizni, A. D. 977.
† Tamerlane's invasion happened in this reign;
‡ And Nadir Shah's in this.

MEMOIR

OF A

MAP OF HINDOOSTAN, &c.

MEMOIR

OF A

MAP OF HINDOOSTAN, &c.

So great an extent of country is contained in this map, and the quality of the materials is so various in different parts, that it became neceſsary, in order to prevent confusion, to divide the account of its construction into separate sections, agreeable to the natural division of the country; and, in some measure, to the nature of the materials. It is accordingly divided into seven sections.

The first contains the sea coasts and islands.

The second, the surveyed tract on the side of Bengal; or that occupied by the Ganges and its principal branches, as far west as the city of Agra.

The third, the tract occupied by the Indus and its branches.

The fourth contains the tract between the Kistna river and the countries traversed by the Ganges and Indus; that is to say, the middle parts of India.

The fifth contains the peninsula south of the Kistna.

The sixth, the countries situated between Hindoostan and China; namely, Thibet, Bootañ, Aſsam, Pegu, Aracan, Ava, and part of Siam: and

The seventh, and last, contains Tables of distances between the principal cities, &c.

But, before I proceed to the particulars of the construction of the map, it will be neceſsary to explain the itinerary measure adopted

in places where no surveys have been taken. The usual measure of this kind in Hindoostan, is the *cofs*, of which the standard has varied considerably at different times, owing to the caprice of certain Emperors: but, it would appear, that those new standards never existed long enough to obtain an establishment in the public mind; which never lost the idea of the ancient standard.

Acbar was the first who made a great innovation in the standard of the cofs. He directed it to be taken at 5000 guz, equal to 4757 yards; that is, about 2 British miles and 5 furlongs. And Shah Jehan, about half a century afterwards, increased the standard one-twentieth part, making the cofs more than 2 miles and 6 furlongs.* But since the time of Aurungzebe, the ancient, or common cofs, has resumed its place, and those of Acbar and Shah Jehan are only heard of in the histories of the times when they were in use.

It may reasonably be expected, that in a country of half the extent of Europe, the estimated length of the itinerary measures, although of the same denomination, must vary in different parts of it. It is no more than what happens in different provinces of the same kingdom, in Europe. But as far as we have any *data* for making a just comparison, the cofs does not vary so much as one-sixth part over the whole country; and between the northern and southern extreme of India (that is, in an extent of about 1700 miles), the difference is not more than one-sixteenth part. The miles vary much more in their proportions, in the different parts of Europe.

Taking the medium of the cofs throughout Hindoostan, and the Deccan, there will be about 40 of them to a degree of a great circle on the globe: that is, each cofs is about a geographical mile and half. But this is to be understood of horizontal measure; in which the windings and inflections of the roads are allowed: for the estimated routes could not be applied to geographical purposes, by any other rule. The cofs, in road measure, is about one statute mile and nine-tenths; or at the rate of 190 British miles to 100

* Captain Kirkpatrick's MSS. of which much more will be said hereafter.

cofses; one part in seven, being allowed for winding, when the line of distance is extensive. Or, seven miles of road measure, are allowed to produce six miles horizontally, or in a direct line.

In Malwa and its neighbourhood, the cofses are larger than any where else, and are about 1,7 geographical miles, or 35 to a degree. And on the road from Baglana to Masulipatam, they are so short, that 46 are required to make a degree. But having only one example for the latter proportion, I shall found no rule on it. The proportions that I have adopted for Hindoostan, Malwa, and the Carnatic, from a great number of examples, are respectively 1,43; 1,71; and 1,6 of geographical miles to a horizontal cofs; or 42, 35, and $37\frac{1}{2}$ to a degree of a great circle. The cofs of Hindoostan proper, is therefore shorter than any other, and prevails throughout the greatest extent of country. There is again in Nagpour (the ancient Goondwaneh) a *Goondy* cofs, which by the medium of all the accounts I could get, is about 2,76 geographical miles, reduced to horizontal distance; or 21,9, or 22 to a degree. This measure appears to be in use by the natives, throughout Mundilla and Boggilcund, as well as in Nagpour; and sometimes occasions great confusion in the reports of the *cofsids*, or couriers: however, they have a computation of Hindoostanny cofses also, in the same country; and the proportions agree in general remarkably well with that scale, between the Bengal Provinces and Aurungabad; and between Mundilla and Hydrabad.

Having mentioned the windings of the roads, it may not be improper to give the result of my inquiries on this head, for the benefit of those who may have itineraries, kept in estimated distances, to work up. One in seven is allowed as above: and is what will be found to take place in large distances, in such countries as are intersected by deep rivers, or watercourses; or in such as have no artificial roads; and where those on the natural level, have obstacles to surmount. The degree of winding of roads, in different coun-

tries, is, *(cæteris paribus)* according to the state of improvement in which the roads are. In India, the roads are at best, little better than paths, and whenever deep rivers (which in that country are frequent, and without bridges), morasses, chains of mountains, or other obstacles, oppose themselves to the line of direction of the road, it is carried round, so as to effect the easiest passage; and for this reason the roads there, have a degree of crookedness, much beyond what we meet with in European countries, where bridges are laid over every considerable watercourse, and where hills are either levelled, or reduced to a convenient degree of acclivity; and after all, expences saved in many cases, by the difference of labour between the smoothing of the direct road, and the forming of a road on the natural level. But the proportions, must of course vary with circumstances; and may be only one in ten, in a dry, open, country, and one that has a tolerably even surface: but this happens too rarely to found any general rule on. As the line of distance increases, a greater degree of winding will take place; or, a short distance will always be on a straighter line than a long one; for in countries where the management of the roads is not arrived at a high degree of perfection, the road through a kingdom will be made up of portions, consisting of the particular roads leading from one city, or principal town, to another, although they may not lie in the general line of direction; and then there will be a general winding, added to the particular one; and the above proportion of 1 in 7, is applied to this compound winding. And, added to this, in very long distances, some natural obstacle, will, very probably, oppose itself: an arm of the sea; a river of difficult passage; a morass; or an impassable ridge of mountains; and change totally the direction of the road: whilst the parts, on each side of the obstacle, might have but an ordinary degree of winding: and it is seldom, but that one or other of these, occurs in the space of 100, or 150 miles. Probably 1 in 8 may be a pretty just general proportion for distances of about a 100 miles; that is, 8 miles by the

road, will be seven direct; or what is commonly termed *bird-flight:* and where the extent is from 200 to 300 miles, 1 in 7.

Measured distances in Hindoostan, do not often occur, where, at the same time, the true horizontal distance is given, except in Bengal: and that is a country too full of deep rivers, lakes, and morafses, to serve as a general standard. In the Carnatic, a dryer country, the medium of winding, in distances of about 100 miles, is 1 in 9. In England, as far as we can trust the maps (which may be done, where the distance consists chiefly of *difference of latitude*), 1 in 11 is the proportion, in distances of about 100 miles; and in very great distances, such as Edinburgh, 1 in 7.

It may happen that the direct route may lie through a desert or an ill-governed country; in which case, travellers will avoid the way, in which famine, or robbery, threatens them, and by these means be carried out of the true line of direction: but it is obvious that no rule can be given for such cases. Upon the whole, the degree of winding, as far as depends on natural causes, must be estimated by the compound ratio of the length of the line of distance, and of the nature of the country, as to evenneſs, dryneſs, and openneſs. And of course, some local knowledge of it will be required, in order to correct the distances in a just degree. *

M. D'Anville concludes his inquiry† into the length of the coſs, by determining the number in a degree, on a medium, to be 87; but it must be observed, that he had no measured lines with which he could compare his estimated distances. On the other hand, in the respective distances of Candahar, Cabul, and Attock, as described by him, each degree contains 47 of Tavernier's coſses.

* Those who wish for a general rule for changing horizontal distance into road distance, in their common references to maps, in general, may break the line of distance (if very long), into portions of not more than 100 or 150 miles; and then add to the whole sum of the distances, so obtained, one eighth part. These portions should be contrived, so as severally to include the spaces, between the points, that diverge most from the general line of direction of the whole road. By this means, the errors arising from the compound winding, will be avoided.

† Eclairciſsemens, p. 14.

SECTION I.

The SEA COASTS *and* ISLANDS.

CALCUTTA is the point I shall set out from, as well from its being determined by several observations of longitude and latitude, as from its having a measured line of considerable extent stretching from it, both to the east and west. I shall first pursue the route westward to the mouth of the Indus; and then return to Balasore, and go eastward to the entrance of the strait of Malacca.

Calcutta, the capital of the British poſseſsions in India, as being the residence of the General Council, has its citadel placed in latitude 22° 33′ north; and in longitude, by a mean of the observations of four different gentlemen, 88° 28′ east from Greenwich. *

Balasore, situated about 101 geographical miles † from Calcutta, is the extreme point of the Bengal survey on the S W; or on the quarter towards Madras. Colonel Pearse's return from the Carnatic, after the termination of the late war, afforded an opportunity of extending a measured line from Madras to Balasore, which had long been a *desideratum*; as the exact positions of the intermediate stations of Masulipatam, Visagapatam, Gangam, and Cattack, points on which many others eventually depended, were wanted: and although there might be no great reason to suppose that Masuli-

* All the latitudes mentioned in this work, being north of the Equator, and all the longitudes east of the meridian of Greenwich, I shall in future mention only the terms latitude and longitude, leaving the species of each, to be understood.

† I have made use of Geographic miles, or those of 60 to a degree, in the account of the construction of the map; and of British statute miles in giving the comparative extent of countries. They are distinguished by G. miles, and B. miles.

patam and Visagapatam were much out of place, in the former map, yet Ganjam and Cattack were doubtful. Col. Pearse's industry and attention have amply supplied what was wanting, within this line. He directed the whole to be measured with a perambulator; and corrected each day's work, or at least, every considerable interval, by observations of the latitude; and the general course being little more than 8 points from the meridian, the differences of latitude, were applicable to the correction of the distance through each particular interval: and for a check on the whole, we had already in our poſseſsion, observations of longitude repeatedly taken at Calcutta and Madras. The whole extent of Col. Pearse's measured line, in road distance, was near 900 British miles; a work of no small labour.

The longitude of Fort William, the citadel of Calcutta, as abovesaid, taken at 88° 27′ 45″,* from the mean of 4 observers; and that of Madras 80° 24′ 40″,† from the mean of 8 observers, gives a difference of meridians of 8 degrees, 3 minutes. It remains then, to compare with this, the difference of longitude found by Col. Pearse's measured route, as communicated by Mr. Pringle in the map drawn by him, and sent to the East India House.

Balasore, by the survey, is 1° 26′ 30″ west of Fort William, and must therefore be in 87° 1′ 30″. Col. Pearse reckons it 1′ 15″ more westerly; but I adhere to the survey. From Balasore to Ganjam, in lat. 19° 22′, Col. Pearse reckons 95 miles of westing, or 1° 41′ 26″ difference of longitude; which brings Ganjam in lon. 85° 20′ 4″.‡ And from Ganjam to Madras he made 5° 2′ 18″ west: whence the

* Hon. Thomas Howe - 88° 33′
Rev. Mr. Smith - - - 88 28
Mr. Magee - - - - 88 24
Capt. Ritchie - - - 88 26
} Mean 88° 27′ 45″

To which may be added the French observation at Ghyretty, which place is 1′ east from Calcutta - - - - 88 29

† Mr. Howe - - - 80° 29′
Mr. Dalrymple - - - 80 24
Mr. Topping - - 80 21
} Mean 80° 24′ 40″

‡ Mr. Mears's observation was 85° 17′ by ☉ and ☽, 1770.

longitude of Madras would be 80° 17′ 44″. Here is found an excefs of about 7 minutes difference of longitude; the measurement giving so much more than the observations. But in examining the map abovementioned, it appears that the difference of latitude between Ganjam and Madras by account, exceeded that by observation 8′ 30″; and if this is to be imputed to excefs of distance (which is highly probable) an excefs of longitude must also have taken place; and this error will amount to about 6′ 48″; or nearly the difference in question. This trifling error of 7 minutes in a difference of meridians of 6 degrees and a half, to whatever it may be owing; whether to overmeasurement by the wheel; variation of the compafs; defects in the instruments; or errors in the observations of longitude; or partly to all these causes; is very immaterial to general geography. The result shews, that we may consider the difference of meridians between the two places, as determined near enough for the purposes of navigation, or general geography.

I must not omit to mention that Capt. John Ritchie, by direction of the Bengal Government, in 1770 and 1771, took the bearings and distances in a general way, from Madras to Balasore; and his result came within one minute of the longitude by observation. But some of his intervals were not well proportioned. His position of Masulipatam, indeed came out only 1′ to the east of Col. Pearse's; but Visagapatam was 7′, and Ganjam 22′ more westerly.

Although Col. Pearse's route serves to fix most of the principal places, on or near the coast, yet oftentimes it deviated considerably, and for a length of space, from the coast; as between Balasore and Jagarnaut; and between Visagapatam and Ongole. These blanks are supplied from the materials of Capt. Ritchie, Major Stevens, Col. Polier, Mr. Cotsford, and others.

First, from Balasore, to Point Palmiras. This was done by Capt. Ritchie, by a series of triangles, formed by three surveying vefsels; and corrected by observations of latitude. The result,

placed Point Palmiras, directly south of Balasore: that is in lon. 87° 1′ 30″; lat. 20° 44′. From Point Palmiras to Jagarnaut Pagoda, the coast was traced in a more cursory manner; and accordingly, the bearing and distance between Balasore and Jagarnaut is very differently given by Col. Pearse and Capt. Ritchie: the account of the former being only 54′ 30″ difference of longitude; and that of the latter, 1° 16′. This very considerable difference is too striking, not to be particularly noticed; and requires that some observations should be made with time-keepers, to ascertain the relative positions of Jagarnaut, Point Palmiras, and Balasore. Wherever the mistake may lie, it is of great importance to have it rectified: for if Col. Pearse's bearing be true (and there appears no reason to doubt it) there must be a very considerable error in the course between Jagarnaut, and Balasore road, in Capt. Ritchie's chart. (See the Index, under *Orifsa*.)

The longitude of Cattack is scarcely altered from what it was in the former map of India; where it was placed on the authority of Capt. Campbell, in lon. 86°. It is now in 86° 1′ 30″; and its latitude stands as before.

From Jagarnaut to Ganjam, the particulars of the coast, are from Col. Pearse's map, collated with those of Ritchie's and Campbell's. From Ganjam to Poondy, is taken from the map of the Itchapour district; and Col. Pearse's route on it, which may be traced from Ganjam to Bindi (near Poondy) furnishes the means of correcting the compafs of that map, which was faulty in a very considerable degree. Bindi serves as a connecting point for the two maps; as Nauparah or Nowparah, a little farther to the S W, does for Pearse's, and Cridland's map of the Tickley district. The coast between Poondy and Bimlepatam is sketched from Lieut. Cridland's map, from Col. Polier's journal, and other MSS. From Bimlepatam to Visagapatam is from Col. Pearse; and from thence to Coringa from a MS. map, compiled during Col. Forde's expedition to Masulipatam, in 1759; collated with Capt. Ritchie's map.

As there have been some observations taken at Visagapatam to ascertain the longitude, it is proper to take notice of them, and to compare the result with the longitude deduced from Calcutta and Ganjam, by Col. Pearse's line. This gives 107,1 miles of westing, or 1° 52′ 54″ difference of longitude, from Ganjam to Visagapatam; from which if we deduct the proportion of the error in the distance (see page 10) the true difference of longitude will be 1° 50′ 39″; which taken from 85° 20′ 4″, the longitude of Ganjam, leaves 83° 29′ 25″ for that of Visagapatam. But Col. Pearse's observation was 84° 23′ 30″ and Mr. Rufsel's 83° 21′ 30″. Its latitude is 17° 42′.

From Coringa to Masulipatam, the figure of the coast is from Major Stevens, as Col. Pearse's route goes far inland, by way of Rajamundry, Ellore, &c. and does not again approach the coast near enough to determine its position, till it comes to Vantipollam, near Ongole. These maps of Major Stevens's and of Col. Pearse's join, at these points, viz. Siccacollum, on the bank of the Kistnah; at Rajamundry; and at Samulcota. And they differ very considerably in the extent between Siccacollum and Samulcota; Major Stevens's giving 6¾ miles lefs than the other; but, I believe, Major Stevens's distance was measured, only in that part which lies between Siccacollum and Narsapour.

Masulipatam has its position very satisfactorily determined, by Major Stevens's measurement from Siccacollum, a place in Col. Pearse's map. It is 17,4 G. miles east; and 8,3 south of it; and comes out 48′ of longitude, east of Madras, or corrected (see again page 10) 47′; its longitude being 81° 12′; lat. 16° 8′ 30″.

From Masulipatam to Madras, the figure of the coast, is generally from Capt. Ritchie, corrected in certain points by the land survey of Col. Pearse. For as the latter came close to the coast at Vantipollam, Carwaree, and Rameeapatam, it appeared that Capt. Ritchie's chart required correction in the great bay between the latter place and Point Divy. I found it neceſsary also to reduce

the point at the mouth of the Pennar river, and make it lefs prominent; as the distance from Nellore to the nearest sea coast, would otherwise have been much too great.* Indeed, it was not expected that by sailing along a flat coast, nearly straight, without landmarks, every small bending of the coast could be ascertained.

It is proper to remark, that the whole difference of longitude between Calcutta and Madras, in M. D'Anville's and D'Apres' maps, comes within a few miles of the truth, as they were in posefsion of the observations taken at Ghyretty and Pondicherry: but their maps are exceedingly faulty in the detail.

The longitude of Madras, or Fort St. George, as was said before, (page 9) is taken at 80° 25′: and its latitude is 13° 5′. Pondicherry, by a series of triangles obtained by means of the Jaghire map, Wandiwash Hill, Permacoil, the Red Hills, and the difference of latitude, I make to be 25′ of longitude, west of Madras; so that Pondicherry will be in 80° just. The mean of the different observations taken there, is 79° 55′ 40″.† Mr. Pringle, who measured the routes of Sir Eyre Coote's army, during the late war, makes the difference of meridians the same as I do, to a fraction. Its latitude is 11° 56′.

Cuddalore, in lat. 11° 41′, and lon. 79° 45′ 45″, is the most southern point, determined by Mr. Pringle's measured routes: but the same gentleman furnishes us, with the bearing of Portonovo from that place; which, with its latitude 11° 30′, allows us to place it, almost to a certainty, in lon. 79° 53′ 30″.

The position of Chillambrum Pagoda, in respect of Portonovo, although so conspicuous an object to the sight, is variously represented. By the mean of what appeared to me to be the best authorities, I have placed it south-west 7½ G. miles from Porto-

* I have allowed Point Pennar to be 16 G. miles to the east of Nellore: most of the MS. maps make it less.

† Con. de Temps - - 79° 57′
Gentil - - - - - - - 79 53
Topping - - - 79 57
} Mean 79° 55′ 40

novo. Mr. Barker determined its position with respect to Devicotta, by a measured base, to be W 16° 45′ N 8 G. miles; which added to the former line from Portonovo, gives 79° 55′ for the longitude of Devicotta. Its latitude appears to be 11° 21′. Most maps allow a much greater distance between Portonovo and Devicotta, than what arises from the above construction; which is 9 G. miles on a S S E bearing: and the foundation of the error appears to me to be the giving the bearing of Devicotta from Chillambrum, too great a degree of southing.

From Devicotta, southward to Negapatam, my authorities are some MS. maps; among which, is one, drawn by M. D'Anville, containing the principal positions between Madras and Tanjore; and seems intended for the basis of a map of the south Carnatic.

Had M. D'Anville's differed from the others, I should have been inclined to give the preference to the result of his investigations; but it happens that all the different maps I have consulted, differ so little among themselves, that none make the difference of longitude between Devicotta and Negapatam more than 1′ 45″; and the mean of the whole is 1′ 15″ east; so that Negapatam may be taken at 79° 56′ 35″ lon.; and latitude 10° 46′.

Thus Negapatam appears to be 3′ 25″ west of Pondicherry, or 28′ 25″ from Madras; and whatever error there may be, must arise chiefly between Devicotta and Negapatam. If there be any, the different geographers and map-makers have all fallen into the same kind of error. I observe that the different maps made of late years, in India, have considered Negapatam as being in lon. 79° 53′ to 79° 54′. I know not whence the idea is taken; but, whether founded or not, it differs but little from mine.

Negapatam is the southmost point, on the eastern side of the peninsula, whose position can be reckoned tolerably exact; unless we except Point Calymere, whose bearing being pretty well known from Negapatam, and its latitude determined with precision; may be considered as being nearly as well ascertained as

Negapatam, on which it depends. Its latitude is 10° 20′; and longitude 79° 54′ 30″.

No connected measured line that can be depended on, has yet been carried acrofs the peninsula; Col. Fullarton's marches, measured by Col. Kelly, extending only to Palicaudcherry; that is, not within 50 G. miles of the coast of Malabar: and those extended southward, through Madura and Tinevelly, ending at Cape Comorin. Fortunately, however, we have a series of longitudes by a time-keeper, deduced from Bombay, by Capt. Huddart, and extended at intervals, along the whole coast, to Anjenga; of which, more will be said hereafter.

Col. Fullarton's march into the southern countries of the Carnatic, gave an opportunity of measuring the distances, and ascertaining the relative positions of Tanjore, Tritchinopoly, Madura, Coimbettore, Palicaudcherry, &c. in respect of Negapatam, where the march commenced. The plan of these marches communicated to me from the East India House, bears the name of Col. Kelly; and is declared to be actually measured, through the points abovementioned. We have to regret that the same attention was not bestowed in the march from Calicut to Palicaudcherry; the intended point of junction of the Bombay detachment, with that of Col. Fullarton: for, in that case, the exact width of the peninsula, had been no longer a matter of inquiry.

Tritchinopoly comes out, by the above map of Col. Kelly's, to be 1° 10′ of longitude west from Negapatam; which taken from 7.5° 56′ 35″, leaves 78° 46′ 35″ for the longitude of Tritchinopoly.* The latitude is 10° 49′.

Madura, by the same authority, is 34′ difference of longitude west from Tritchinopoly; that is, in lon. 78° 12′ 35″. Here it must be noted, that great discordance arises between the different accounts

* A map, drawn by Baron Wersebe (of the Hanoverian corps) accords in this particular, and indeed, in every other material one, with that of Col. Kelly: but I have no knowledge how Baron W. procured his materials.

of the bearing and distance between Tritchinopoly and Madura, as given by Kelly, Montresor, and others. The two former differ 1,6 G. miles only in distance; but Col. Kelly's bearing, gives 12,3 G. miles, more of westing, than Montresor's. And a third map, communicated by Mr. John Sulivan, has the same bearing with Kelly's, but exceeds it, 3,7 G. miles, in distance; thereby, increasing the westing 1,3 G. miles; and of course, exceeding Montresor's 13,6 G. miles, or 14′ 15″ of longitude.

The latitude of Madura, I have not yet learnt. Sir John Call's map places it in 9° 52′ 30″; and Col. Kelly's difference of latitude from Tritchinopoly, 53′ 12″, gives 9° 55′ 48″.

The authority for the remainder of this line, through Palamcotta (or Tinevelly) to Poolytopu on the sea coast, westward of Cape Comorin, is from the map of Madura and Tinevelly, made under the direction of Sir J. Call (then Chief Engineer at Madras) and from Mr. Pringle's road distances; together with the latitudes of Palamcotta and Poolytopu. First, I find in Sir J. Call's map, 1° 9′ 30″ difference of latitude S between Madura and Palamcotta; and 18′ of longitude, west. This would place the latter in 8° 43′ (Mr. Pringle informs us, that its latitude is 8° 44′) and in lon. 77° 54′ 35″. Then, from Palamcotta to Cotate or Cotaur, on the west of the Gauts, Sir J. Call's map gives 29′ 12″ difference of latitude S; and 22′ difference of longitude west; to which, if we add the deduction from Mr. Pringle's measured distance to Poolytopu, 5′ 30″ difference of latitude S; and 6′ difference of longitude west;* the whole difference of latitude will be 34′ 42″ S, and difference of longitude 28′ west; giving for the position of Poolytopu, lat. 8° 9′ 18″; lon. 77° 26′ 35″.

Poolytopu village appears to be situated on the sea coast, ENE 4 G. miles from Cadiapatam Point; which point, by Mr. Howe,

* The bearing between Cotate and Poolytopu, is inferred from some MS. maps of no great authority, to be about S W¼ W. The whole distance being only 8 G. miles, the difference of longitude would be but little affected, by any error that might reasonably be expected in the bearing.

is reckoned in lat. 8° 1′; and Poolytopu being about 1′ 30″ to the N of it, should be in 8° 8′ 30″, according very nearly with the above calculation. It must, I think, be acknowledged, that there is nothing in this deduction, that appears forced. Poolytopu, by the best account I can get (a French MS. map in Mr. Dalrymple's collection), is 16′ of longitude west of Cape Comorin; which Cape, by this account will be in lon. 77° 42′ 3.5″.

We have some further light thrown on this subject by the measurement of the road, by Mr. Pringle, from Tanjore to Poolytopu. His whole road distance is 251½ B. miles; and allowing 1 in 9* for the winding of the road, the horizontal distance will be 223½ B. miles, or 193 G. miles; which, on the same bearing as the above deduction is founded on (S 33° 40′ W), gives difference of latitude 2° 41′ 18″; and westing 107,4: or difference of longitude 1° 49′ As Tanjore is in 10° 46′ 30″, the latitude of Poolytopu comes out 8° 5′ 12″, and its lon. 77° 23′ 15″ (the longitude of Tanjore, by Col. Kelly's measurement, being 79° 12′ 15″, deduced from Negapatam) and 16′ added to it, gives for the longitude of Cape Comorin 77° 39′ 15″, or 5′ 20″ to the west of the first calculation.

Again, if the proportion of 1 in 8 be adopted for the winding of the road (a more common one), it produces 190 G. miles † of distance; and the latitude of Poolytopu will be 8° 8′; and its lon. 77° 20′ 50″; and that of Cape Comorin 77° 36′ 50″.

This is all the satisfaction that I have been able to obtain, concerning the longitude of Cape Comorin, as deduced from the eastern side of the peninsula. Something depends on the truth of the assumption, respecting the position of Negapatam; and still more

* The road from Madras to Tritchinopoly had a winding of - 1 in 9

Tritchinopoly to Velore	1 in 10	Mean 1 in 8½.
Madras to Tanjore	1 in 9½	
——— Wandiwash	1 in 8	
——— Carongoly	1 in 9½	
Arcot to Wandiwash	1 in 7	

† The distance arising on the lines of Kelly and Call is 186,25 G. miles.

on the accuracy of the map of Tinevelly, the history of which, I am unacquainted with: but, I think, the near coincidence of Mr. Pringle's measurement, with it (for I reckon 3′ 20″ but a trifle in general geography) is a presumptive proof of its general truth. It is understood that there is from 1 to 2 degrees of westerly variation, between Negapatam and Cape Comorin; if this be allowed, it will remove the Cape 4′ 30″ further to the west; and place it, according to Kelly's and Call's lines in 77° 38′ 5″.

Let us now turn to the other coast, and observe how Capt. Huddart's and Capt. Dundas's deductions of longitude, from the west to Anjenga, accord with the reputed space, contained in the interval between Cape Comorin and Anjenga; which space, by Mr. Dalrymple's observation of the difference of longitude shewn by his time-keeper, in 1777, was 52′ 30″. This, taken from 77° 38′ 5″, leaves 76° 45′ 35″ for the longitude of Anjenga.

Capt. Huddart's longitude of Anjenga, deduced by time-keeper from Bombay, reckoned in 72° 40′ is	-	76°	39′
Capt. Dundas's	- -	76	30
Mr. Dalrymple's	- -	76	38

As Capt. Huddart's series of longitudes commenced at Bombay in lat. 18° 58′, and were continued to Anjenga in lat. 8° 39′, and then back again to Bombay; by which the error of his time-keeper was ascertained, and which was only as much as amounted to 2¼ minutes of longitude; we have every reason to be satisfied with this series, as far as respects general positions: and indeed, geography is greatly indebted to the labours of this gentleman, who has presented us with the longitudes of 16 places on this coast, and by that means given the true general figure of it, which exhibits, to those who have been in the habit of contemplating it, a very different form, from what it ever did before.

I am of opinion that more dependance may be placed on Capt. Huddart's longitude of Anjenga, deduced from Bombay, in the manner abovementioned, than on any other account: but at the

same time I have adopted Mr. Howe's observation of longitude at Bombay, as it appears the most consistent with other accounts. I do not mean by this, to determine on the merits of the different observations (of which indeed, I am incapable), but rather because it accords with the observation taken at Goa, and with the routes across from Negapatam to Tanore; and, as far as may be judged, with the deduction from Negapatam to Cape Comorin. It is true, that if Montresor's position of Madura is admitted, it will place Cape Comorin 12′ farther eastward; and if the variation be not allowed, there will be 4′ 30″ more to be added; in all 16′ 30″, or the full difference between Capt. Howe's, and Capt. Huddart's observations; the one being 72° 38′, the other 72° 54′.

It now remains, after this investigation, to be shewn, in what manner I have compounded the above differences; that no distortion of the intermediate parts should take place. Anjenga, I have placed in 76° 40′, being the mean of all the different accounts, by observation; and by deduction from Negapatam. Mr. Dalrymple's difference of lon. 52′ 30″ to Cape Comorin, is then adopted, which places the Cape in 77° 32′ 30″. Madura, is placed in 9° 52′, the latitude given by Call; and its longitude is determined by Col. Kelly's distance from Tritchinopoly, with the addition of 3 miles to it; that is, in lon. 78° 11′; and Palamcotta in lat. 8° 42′, and lon. 77° 49′ 15″; according to the proportions furnished by Call and Pringle, between Madura and Poolytopu.

The form of the coast between Madras and Cape Comorin, is from various authorities. The survey of the Company's lands (or Jaghire) extends beyond Alemparvé. From thence to Negapatam, is from a French MS. map, collated with D'Anville's map of positions (above spoken of) and several particulars between Pondicherry and Portonovo, from Mr. Pringle's map of the marches. The mouth of the Coleroone is from an English MS. map. From Negapatam to Tondi, is chiefly from Major Stevens's, and my own observations: from Tondi to Good-water Island, Major Stevens's

alone: from thence to Tutacorin, Capt. Delafield's cursory survey: and the remainder to Cape Comorin, is from Sir J. Call's map of Tinevelly; corrected occasionally by a printed chart, published by Mr. Dalrymple. It is not pretended that any of these points beyond Cuddalore, are ascertained with precision: but it is highly probable that Point Calymere cannot be out in its longitude 4 minutes. Tondi has the bearing and difference of latitude from Point Calymere to correct its position; and there was also a line drawn from it to Tanjore. Ramanad is fixed by the intersection of two lines, from Madura and Tondi; and therefore must partake of the errors incident to Tondi, and Point Calymere. The Point of Ramiseram is also dependant on Tondi. When I constructed the map of India, in 1782, I concluded that the respective distances between Tondi, Tritchinopoly, and Devicotta, had been measured, and that I worked on sure ground: but I have since been convinced of the contrary.

From Cape Comorin to Anjenga, the particulars of the coast, appear to be either little known to us, or very ill described; as the reports of it are various and contradictory. Between Cape Comorin and Ruttera Point, I took the particulars from a French MS. chart, the scale of which appears to be faulty; for it gives only 35 G. miles of distance between Cape Comorin and Point Ruttera; and the difference of latitude only 13′ 48″, by which the latter would be in 8° 14′; whereas, it cannot well be under 8° 20′, according to Mr. Howe's observation: and Mr. Dalrymple observes that Ruttera Point is nearly 29 G. miles from that of Cadiapatam, which is about 19 from Cape Comorin. On these ideas, I have extended the distance to 46½ miles; and still Ruttera is only 28′ from Cadiapatam. M. D'Apres' account of the bearings and distances between Cape Comorin and Anjenga, gives 42′ difference of longitude; but then his chart contradicts that account, and gives 44½; besides an absolute discordance in particulars. Mr. Pringle measured only 49½ B. miles of road distance, between Poolytopu and

Anjenga, which cannot be more than 38 G. miles of horizontal distance: and falls short of my expectations, more than 9 miles. All that I could do, was to give the coast such a form, as my mind had conceived of it, by perusing these different accounts: at the same time, I confefs, none of them appear conclusive: and until we know the exact position of Poolytopu, in respect of Cape Comorin, we cannot allow Mr. Pringle's measurement to discredit in the least Mr. Dalrymple's difference of longitude. We may here observe, by the way, that coasts of such rotundity of figure, as the termination of this great peninsula, are seldom so well determined, as those that embay, and where the same point remains long in view, and is of easy discrimination. Here the projecting points succeed each other too rapidly to allow a sufficient degree of precision in calculating either the bearing, or the distance. The latitude of Cape Comorin I have taken at 8 degrees.

Coylan or Quilon, a Dutch factory about 14 G. miles to the N N W or N W of Anjenga, is the next place, whose longitude is noted by Capt. Huddart; but as it cannot be expected that places differing only a few minutes of longitude from each other, can be determined with precision by this means; I shall pafs on to Porca, another Dutch factory, in lat. 9° 15′, and longitude by Capt. Huddart 76° 10′. I can by no means reconcile this longitude with the Dutch MS. maps of this coast; for as the difference of longitude between Cochin and Porca by Capt. Huddart is only 8′, the bearing ought to be S 10° E; whereas in the map, it is S 25 E. In order not to do too much violence to either report, I have allowed 16′ difference of longitude, instead of the 8′ of Capt. Huddart's and the 10′ of Capt. Dundas. The Dutch MS. in question contains the whole coast from Coylan in lat. 8° 51′, to Cranganore in lat. 10° 23′; together with that vast afsemblage of lakes, that extend in some places 30 miles inland; and are the repositories of the waters that spring from the west side of the Gauts; the whole country hereabouts being very flat, marshy, and unwholesome. This

MS. map, which is also in Mr. Dalrymple's collection, contains a most valuable addition to the geography of this part of the peninsula.

Cochin, the principal settlement of the Dutch, on this coast, is the next place in Capt. Huddart's table of longitudes: and is reckoned by him, in 76° 2′; lat. 9° 58′. Capt. Dundas makes it 75° 58′; and M. D'Apres, in his new *Neptune Orientale*, 76° 8′.

Capt. Huddart has not noted the longitude of any place between Cochin, and Tellicherry, in lat. 11° 48′: and there being only a single observation at the latter, I am inclined to pass over the consideration of it; and proceed to the next point of observation, Mount Dilla (or Delly) where 3 observations were taken. Mount Dilla is a remarkable promontory situated in lat. 12° 1′; lon. 75° 2′; or 1° west of Cochin.

We have two accounts of the bearings of the coast between these places: the one from M. D'Apres; the other has its particulars from different authorities. Neither of the two differ essentially; and it is necessary to examine them carefully, as the result is to be used in comparing the longitudes of Paniany and Tanore, deduced from Capt. Huddart's observations; with that deduced from the marches of the Colonels Fullarton and Humberstone, across the peninsula.

M. D'Apres' account is as follows:

Cochin to Cranganore	N by W -	$25\frac{1}{2}$ G. miles.
——— Paniany -	N 7° 15′ W	21
——— Calicut - -	N N W -	42
——— Mahé -	N W by N	30
——— Mount Dilla	N W -	30

The whole, added together, gives a bearing of N 25° 30′ W, distance 144,5 G. miles; on which, the difference of latitude is 2° 10′ 30″, and westing 10,62. But as the true difference of lati-

tude is only 2° 3′, there is an excefs of 7,5 in northing, and 3,6 in westing; and the corrected departure, 58,4, gives the same difference of longitude as set forth in Capt. Huddart's table.

The second series of bearings and distances, are these:

Cochin to Cranganore (by the Dutch MS. map)	N 12° W	24,9 G. miles.
——— Paniany (by D'Apres)	N 7° 15′ W	21
——— Tanore (by D'Auvergne)	N 20° W	14,7
——— Calicut (by ditto)	N 19° 15′ W	24,3
——— Mahé (by D'Apres)	NW by N	80
——— Mt. Dilla (by De Funck)	NW by W	28,4

This series, corrected by the difference of latitude, gives about 2′ of longitude, more than that of D'Apres; a matter hardly worth considering.

Paniany is much the same in both accounts; and when corrected in position, by the proportion applied as above to D'Apres' series, will be in lat. 10° 41′ 45″, lon. 75° 55′; or 7′ west of Cochin. And Tanore, by D'Auvergne's account of its position, in respect of Paniany, will be in lat. 10° 55′, and lon. 75° 49′; or 13′ west of Cochin.

It may be observed that De Funck's bearing of Mount Dilla from Mahé is N W by W, while that of D'Apres is N W, and 1,6 more in distance. The fact is, that the compafs in De Funck's plan is erroneous, the bearing of Mount Dilla being there W 22° 45′ N from Mahé; and W 23° 30′ N from Tellicherry; although the difference of latitude requires it to be almost a point more northwardly. The true bearing is still a *desideratum*, but I have obtained an approximation towards it, by means of bearings taken by two ships in Tellicherry road. By the mean of these, the bearing

of Mount Dilla from Mahé, appears to be W 33° 15′ N* or nearly NW by W; and the distance on De Funck's plan (which is understood to be measured) is 28,4 G. miles. This gives 24′ 30″ difference of longitude, or 7.5° 26′ 30″ for the longitude of Mahé; whose latitude is 11° 45′ 18″. And Tellicherry being by the same plan 3′ 30″ west of Mahé, will be in 75° 23′ lon. and lat. 11° 48′. Capt. Huddart's table gives only 16′ difference of longitude between Mount Dilla and Tellicherry, although stated above to be 21′; but I have before observed that these sort of observations are more to be depended on, in great differences of longitude than in small ones: not to mention that in the calculation of these differences, the actual place of observation (that is, on board the ship at anchor in a road, or coasting along shore) is often adjusted to the place whose longitude is to be recorded, and which may be styled the nominal place of observation, by estimated distances.

Deducing the longitude back again from Mount Dilla to Tanore, a difference of 2′ must of course be expected, as the two series of bearings give that difference in the longitude; and Tanore will be 75° 51′, or 2′ more easterly than the deduction from Cochin in the last page.

And now it will be proper to examine how far the lines of bearing and distance, drawn by Col. Kelly, and Lieut. D'Auvergne, across the peninsula, in the parallels of Tritchinopoly and Tanore, agree with the results drawn from Capt. Huddart's observations.

Col. Kelly's survey of Col. Fullarton's march to Palicaudcherry, was, according to the paper accompanying it, in the East India House, measured the whole way. The result, according to the

* One of these bearings was N W ½ W at ½ of a mile off shore: the other, said to be 2′ off shore, was N W by W. By reference to a plan of the road, it appears that the latter station could have been only 1¼ off shore, as the depth of water was no more than 5¼ fathoms. We may observe that Mount Dilla should have bore more westerly from the observer that was nearest the shore, than the one farthest off: but there is seldom much nicety observed in taking bearings on shipboard, although so much depends on it. By calculation, the difference of the angle between an observer at ½ off shore, and another at Mahé, would have been 3° 15′; and that at 1¼ off shore, 3° 30′. So that Mount Dilla would bear from Mahé by the first compass W 36° N; and by the second, W 30° 30′ N: the mean of which is W 33° 15′ N.

map, gives 184,25 G. miles of westing from Negapatam, or 3° 7′ 48″ difference of longitude; placing Palicaud in 76° 48′ 47″; and in lat. 10° 51′; that is, 5′ north of Negapatam. Of the route of Col. Humberstone from Tanore to Palicaud, I have seen no less than 5 different plans; some of them differing 6′ in longitude (that is, in distance), where the whole space did not exceed 57 miles. One alone among these had the author's name to it, and therefore demanded the preference: It was by Lieut. D'Auvergne. I am yet to learn whether the distance was measured or not; but I should hope and expect it was, or a great part of it; for one of the copies, and which appears to have been transmitted during the march, distinguishes between the measured and estimated parts;* the former seeming to be the part marched over, and the latter the part the detachment had yet to march. D'Auvergne's plan gives 56¾ G. miles of westing between Tanore and Palicaud, or 58′ 15″ difference of longitude; thereby placing Tanore in lon. 75° 50′ 32″, according to the abovementioned longitude of Palicaud, deduced from Negapatam. The copies of this route, inserted in the maps of Col. Kelly and of Baron Wersebe, give only 50½ G. miles, or 6¼ less of westing than D'Auvergne's. Another map (communicated by Mr. J. Sulivan), and probably in this part copied from D'Auvergne's, gives 57 miles; and a fifth, transmitted by an officer in Col. Fullarton's army, precisely the same as D'Auvergne's; that is 56¾.

If we adopt D'Auvergne's distance, the longitude of Tanore, deduced from Negapatam, will be - - - 75° 50′ 32″

Deduced from Capt. Huddart's observations at

Mount Dilla - - - - 75 51

And from the same at Cochin - - - 75 49

Mean of all 75 50 10

* It should be a rule observed in all plans, to note how the scale was obtained; whether by actual measurement; difference of latitude; or estimation of distances: to which may be added, that the meridian line or parallel should be drawn across the whole space in the plan, to prevent errors in measuring the angles of bearing.

Scarce any discuſsion of the sort could be attended with a more satisfactory result: and I think it affords the strongest presumptive proofs of the truth of Capt. Howe's observations at Bombay; from which the longitudes shewn by Capt. Huddart's time-keeper, are deduced.

With respect to my former ideas of the breadth of the peninsula, although the extent in longitude between Bombay and Madras, remains nearly as before; yet by the swelling out of the coast, on the south of Bombay, I reckoned it too narrow by about 30 G. miles in the parallel of Madras; and 27 in that of Pondicherry.

I have now concluded the discuſsion of the longitudes acroſs, and round the southern part of the peninsula; and also an account of their application to the map: for a rigid adherence to difference of longitude even by observations of the above kind, between places not far removed from each other, would in some cases, distort the relative parts of the map beyond probability; and therefore, it was neceſsary, in some measure, to accommodate the differences, when the existing authorities appeared to carry more weight than the observations: which, as we have observed before, are subject to error, even in the application: and they are no leſs so, from a casual variation in the rate of a time-keeper. A series of observations, such as we have been considering, must in a general view, be regarded as decisive; but it would be hazarding too much to adopt each particular longitude, when it was contrary to every other authority. Much leſs can any absolute dependance be placed on lines of bearing and distance taken from maps, whose history and construction is not before us. And where more authorities than one may occur, and those not agreeing; in such cases it must be left for the judgment to determine which appears the most probable. Now, although there are strong presumptive proofs of the general truth of the relative positions of the principal points between Cuddalore and Anjenga, yet they do not rest on the same solid foundations, as the positions in the north part of the peninsula: and therefore Cape Comorin is placed more with relation to Anjenga, than

to the eastern coast. Again, the respective differences of longitude between Anjenga, Porca, and Cochin, do not well accord with other authorities; and therefore as these differences of longitude are very small, I thought the Dutch MS. map might be better authority for them, than the differences shewn by the timekeeper. Another particular is to be noted, concerning the longitudes on the south of the parallels of Cuddalore and Mahé: (viz.) that these will be found somewhat different in the map from the above account; for when the map was constructed, I was not in posſeſsion of some papers which throw an additional light on the subject: but these differences are very trifling. Some few errors also crept into the construction; so that upon the whole, this account contains rather what the map ought to be, than what it is: though, poſsibly, the errors I am pointing out may be so small, that they would have escaped the notice of all but profeſsed geographers.

Tanore and Cochin are both placed 3′ to the eastward of the aſsigned longitude (page 23); and Negapatam 1′ to the westward of what is given in page 14; by which double error the peninsula is made to be 4′ narrower than was intended, in that parallel. I was ignorant at that time that there was a plan of Humberstone's march, which had the author's name to it; and therefore had taken the mean of all the others. We will now resume the subject of the construction.

The latitude of Calicut I have taken at 11° 18′. This city is remarkable for being the first Indian port visited by European shipping: that is, by the Portuguese, who landed there under Vasco de Gama in 1498. It was then the most flourishing place on the Malabar coast, the Zamorin or Emperor making it the capital of a very extensive state. It appears to have fallen in its consequence soon after; the new power of the Portuguese occasioning a revolution throughout the maritime parts of the peninsula.

The form of the coast between Calicut and Mahé, is taken from a sketch of Major Abingdon's. Chitwa is said to be in lat. 10° 38′,

by Capt. Drummond; but I cannot reconcile its situation to that parallel; as it cannot well be so near to Paniany. I have placed it in 10° 33′ 15″.

Mangalore is the next place to Mount Dilla, in Capt. Huddart's table, and its longitude given is 74° 44′; lat. 12° 50′. For about $5\frac{1}{2}$ leagues to the N W of Mount Dilla, the form of the coast is taken from a French map in Mr. Dalrymple's collection; the rest of the coast to Mangalore, and from thence to Coondapour (or Basselore) in lat. 13° 36′, is little known as to particulars. A large river named Cangerecora, whose course is from the north-east, falls in about 4 miles to the north of Mount Dilla; previous to which, its course is parallel with the sea coast for about 11 miles, being separated only by a spit of sand. The forts of Nelisuram, Ramdilly, and Matteloy are situated on this river, which is joined by several other rivers, or streams, that descend from the Gaut Mountains; which in this part approach within 22 miles of the coast. I cannot help considering this Nelisuram, which is situated about 12 miles up the river, as the place meant by Nelcynda and Melcynda, by Pliny and Ptolemy; a place visited by the Egyptian and Roman ships.

We have been lately brought acquainted with the particulars of the coast between Barcelore and Meerzaw (or Merjee), by means of a map drawn by Capt. Reynolds, during the war which terminated so unfortunately for the British arms in 1783, in the Bednore country; to which this part of the coast is opposite. This map is drawn in a most masterly style, and contains near 60 G. miles of the coast; and extends inland to the foot of the Gauts, which here approach, in some places, within 6 miles of the sea, and are never more than 20 from it. It includes the positions of Bednore and Bilghey within the Gauts; and also, Onore, Batcole, and Coomtah on the coast. We are furnished with the means of joining this portion of geography to the rest, by having the longitude of Pigeon Island determined by Capt. Huddart; and by the position of it in

respect of Fortified Island, near Onore. Pigeon Island is very small, and lies about 8 G. miles from the coast, and 15 from Onore,* and is in lat. 14° 1′. Its longitude is 74° 6′ 30″.

From Meerzaw to Cape Ramas in the neighbourhood of Goa, we are but ill informed concerning the particulars of the coast. Between these are situated the port of Carwar, and the islands of Angedive, both of them better known to the English in the early period of their India trade, and before they were in posſeſsion of Bombay. Capt. Huddart fixed the longitude of Oyster Rock in the mouth of Carwar Bay, and also that of the Aguada Point and Castle, on the north side of the entrance of Goa Bay, or road. This he makes to be in 73° 34′ 30″; and it is worthy of observation, that the city of Goa, which is 11′ 15″ more to the eastward, and consequently in 73° 45′ 45″ by the same account, was placed in the same position within a fraction of a minute, by the observation in the *Con. de Temps*; and which, for want of being better informed, I formerly disregarded. The positions of Cape Ramas, Angedive, and Carwar Points, are corrected in respect of Aguada, by a set of observations and bearings of the late Capt. Howe, whose attention to marine science was equal to his gallantry, and knowledge of the practical part of his profeſsion. I have had occasion repeatedly to acknowledge the aids I have been furnished with, by means of his collection of Observations and Remarks, in the poſſeſsion of Mr. Dalrymple.

The figure of the island of Goa, and its environs, to the foot of the Gauts, is taken from a Portuguese MS. map of Mr. Dalrymple's. The latitude of Goa, and of the Aguada Castle, is 15° 28′ 20″.

Goa, the capital of the Portuguese settlements in India, and the seat of a viceroy, is a very considerable city. It was first taken poſſeſsion of by Albuquerque in 1510, and from a prince of Saracen extraction, according to Jarric.

* When Fortified Island bore E ¼ N distant 2½ miles, Pigeon Island bore S ¼ W, and Hog Island SSE. Hog Island bears from Pigeon Island E ¼ S, distant about 7 miles.

The coast between Goa and Bombay, near 220 G. miles, is little known to us in detail, nor indeed was the general bearing of it known, until Capt. Huddart furnished us with his series of longitudes. By his account it appears, that this coast, although in the neighbourhood of our principal marine station and arsenal in India, was described in the charts, with an error of very near a whole point of the compafs, in bearing. Indeed the whole western coast of India has far too great an obliquity from the north towards the west, in all the former charts; my own not excepted.

Perhaps there are few coasts so much broken into small bays and harbours, and that at the same time have so straight a general outline. This multitude of small ports, uninterrupted view along shore, and elevated coast, favourable to distant vision, have fitted this coast for the seat of piracy; and the alternate land and sea breezes that prevail during a great part of the year, oblige vefsels to navigate very near the shore. No wonder then, that Pliny should notice the depredations committed on the Roman East India trade in his time; and although a temporary check has been given to them in our own, by the destruction of Angria's fleets, &c. yet we may expect that the practice will be continued while commerce lasts. The pirates are protected by the shallownefs of their ports, and the strength of the country within. And as pirates, they have greater natural advantages than those of Barbary, who being compelled to roam far from their coasts, have expensive outsets; here the prizes come to their own doors; and the cruisers may lie secure in port, until the prey is discovered.

The Vingorla Rocks in lat. 15° 52′ 30″ Capt. Huddart took the longitude of, next to Goa, and made it 73° 16′ 30″. These rocks lie about 6 or 7 miles off shore, of which we know but few particulars, farther than that it is pofsefsed by a piratical tribe named Malwaans. The principal ports hereabouts are Melundy or Sunderdoo, a fortified island about 10 miles to the N E by N of Vin-

gorla Rocks, and reduced by Commodore James in 1765: also Rairee, Vingorla, and Newtya: which last I cannot help thinking is the *Nitrias* of Pliny, near which the pirates cruised for the Roman ships.

A Dutch MS. chart afsisted me in drawing the coast between Melundy and Antigherrya, an extent of about 70 G. miles. This chart was procured by Sir Joseph Banks for Mr. Dalrymple: and the tract comprised within it, contains the ports of Dewgur, Tamanah, Rajapour, Rampa, Antigherrya, and also Geriah, late the capital and principal port of Angria. This place was found by Capt. Huddart to be in lon. 73° 8′; and its latitude is 16° 37′. Between Antigherrya and Bombay, are the ports and islands of Zivagee, Dabul, Severndroog, Fort Victoria (or Bancoote), Sufferdam, Danda-Rajapour, Choule and Coolabba. At Victoria, the longitude was found to be 72° 54′: latitude 17° 59′. The latitudes alone of several of these places, helped me to settle their positions, as the coast is nearly meridional; but I hardly expect to be free from mistakes, in fixing such a number of places, within so confined a space, and with so few aids.

Bombay, the principal port and settlement of the English in this quarter, is situated in lat. 18° 58′, longitude by Mr. Howe's observations 72° 38′. I have placed it in 72° 40′, or 2 minutes farther to the east, which was occasioned originally by a mistake, and which would have cost too much time to rectify, had I attempted it. Bombay is a small island, scarcely more than 7 miles in length, and very narrow, containing a very strong and capacious fortrefs, a large city, and a dock-yard, and marine arsenal. It was ceded to the English in 1662, by the Portuguese, as part of the dower of the Queen of Charles II. On the N E it is separated by a narrow strait from Salsette, a fine island of about 15 miles square, and an acquisition from the Marattas in 1773. Bombay, Salsette, and the neighbouring shores of the Continent, form a large sound, in which are several other islands, particularly Caranjah and Elephanta, the

latter famous for its subterraneous temple, and both of them acquisitions from the Marattas.

Salsette has also its subterraneous temples, cut out of the live rock: all of which appear to be monuments of a superstition anterior to that of the Hindoos.* On the east side of Salsette, and on the borders of the sound just mentioned, stands the fort of Tannah; probably on the site of the place of that name in the tables of Oulegbeg, &c. and on the opposite side of the sound, is the mouth of the river of Callian, or Gallian; the ruins of which are noticed by Fryer, and are probably those of the *Calliana* of the *Periplus Mar. Erytb.* (See Orme's His. Frag.)

Baſseen, a city and fortreſs of note, is situated on the point of the Continent opposite to the north end of Salsette. This place fell into the hands of the English, after a smart siege in 1780, but was restored to the Marattas, together with all the other conquests made on that side of India, at the peace of 1783, Salsette and the small islands excepted. Baſseen is situated in lat. 19° 19′, and under the same meridian as Bombay, as appears by the maps of that island and Salsette.

From Baſseen to Surat, the surveyor with General Goddard's army, drew a measured line (as I am informed), and the result gave 9,5 G. miles of easting, or 10′ of longitude, for the difference between Baſseen and Surat; by which the latter should be in lon. 72° 50′. The difference of latitude N from Baſseen, was found to be 1° 52′, which, added to 19° 19′, gives 21° 11′ for that of Surat. It is placed in 21° 10′ 30″.

It is a great misfortune to geography, that no one observation of longitude should have been taken on the west of Bombay: by which default, we are precluded from correcting an extent of 7 degrees of longitude, along a coast that winds in such a variety of

* At Elora near Dowlatabad, more than 200 miles to the east of Salsette, are other temples cut out of the rock. For an account of these, see Thevenot: and for the former, Anquetil du Perron.

directions, and whose geography is composed of materials of so miscellaneous a kind, that it can hardly be expected we should steer clear of error in the construction of it. The position of Surat is indeed checked by the measured line of General Goddard's march from Burhanpour; where Mr. Smith had an observation of the longitude. And we have also a measured line profeſsedly taken with bearings on shore, as far as Amedabad. But compaſses often differ; and the variation is as often neglected.

Mr. Smith's longitude of Burhanpour is 76° 29′ (but I have taken it in my map at 76° 19′, the reason of which I shall shew in its proper place), and it is taken notice of now, only with a view to shew how far Surat, as it is placed here, agrees with the observation made on the east of it.

By the survey of Goddard's march from Burhanpour to Surat, the difference of longitude between the two places appears to be 3° 30′ 45″, which taken from 76° 22′, leaves 72° 51′ 15″ for the longitude of Surat. I have before observed, that its longitude deduced from Bombay is 72° 50′: but having taken Burhanpour at 76° 19′, Surat will be in 72° 48′ 15″, and that is the longitude I have adopted for it; altering at the same time Goddard's difference of longitude from Baſseen to 8′ 15″, instead of 10′. And as Mr. Howe's longitude of Bombay was altered from 72° 38′ to 72° 40′, it appears that Surat stands as it would do by Mr. Howe's original observation, and with Goddard's original difference, of longitude.

The materials under different authorities, for the form of the coast between Baſseen and Surat, do by no means accord together; nor have I the means of determining which to prefer. From Baſseen to Arnaul, a fortified island commanding the entrance of the Angaſsyah, or Mandavee river, I take from General Goddard's march, the only authority I can find. From Arnaul to Nonsary or Noſsary, a few miles short of Surat river, there is a chart by Lieut. Ringrose; and also a chart from St. John's Point, to Surat river, by Lieut. Skynner: by which means, we have about 50 miles

of the space contained in Skynner's chart, included also in Ringrose's; and an opportunity is given of comparing their bearings and distances, as well as Goddard's, which includes nearly the same space. Here, to our utter astonishment, we find two charts, profefsedly taken by authority, differ 11 degrees in bearing in an extent of 60 miles! for so much more eastwardly from the north does Mr. Skynner make the bearing of Surat from Omergong, than Goddard's map does. As to the comparison between Ringrose and Skynner's charts, from St. John's Point to Nofsary, Ringrose makes the bearing N 2° W, and Skynner N 16° E. Goddard's route coming close to the sea in the neighbourhood of St. John's, shews, if we may rely on his map, that the truth lay between Ringrose and Skynner; but that Ringrose came the nearest to it.

Having taken Goddard's line for the general bearing, I have adapted the other charts to it, in the best manner I could; preserving all their particulars, in which they do not differ so much as in generals. Such excellent surveying marks as Tarrapour and Valentine's Peaks, and Poneira Castle, &c. offer, might easily afford *data* for a series of triangles; and of course, for a general survey of this coast, in skilful hands: and take away from us the reproach of remaining ignorant of the true courses between two of our principal factories, Bombay and Surat. St. John's Point does not appear to project far from the general line of the coast, either by Goddard's or Ringrose's accounts, though described in that manner in all former charts. The shallownefs of the water near it, has probably kept navigators at too great a distance to be informed of the truth. I apprehend that the hill called Segwah, in General Goddard's route, is what is called Valentine's Peak by navigators.

From Surat to Amedabad, through the city of Broach, there is a route of General Goddard's, profefsed to be measured, and taken mathematically. We had previously maps or surveys of the country between Surat and the river Myhie, extending inland to Brodera, Dubhoi, and Zinnore, on the Nerbudda; but none of them went

beyond the Myhie. The following is the comparison between the bearings and distances of the different maps as far as they go.

From Surat to Brodera, by Goddard	N	18° 55′ E	69,95 G. miles.
——————— Turner	N	20 5 E	68, 4
——————— Himming	N	18 28 E	68,85
Mean	N	19 24 E	69,07

The differences here are not great, considering how much compafses and measures often differ among themselves. The mean of the 3 accounts differs so little, in any respect from Goddard's, that we need not hesitate to adopt the rest of his line to Amedabad, which is something more than 50 miles to the north-westward of Brodera. The most remarkable difference in this quarter, is between Mr. Skynner's and others' bearings and distances between Surat and Cambay.

Mr. Skynner's is -	N	22° W	83,2 G. miles.
Mr. Taylor's -	N	9° 5′ W	67,7
Mr. Himming's -	N	10 30 W	68,3

And it is remarkable that the deviation here, is from the north towards the west; on the former occasion, it was from the south towards the west. As Taylor's, Himming's, and Goddard's, agree so nearly between Surat and Brodera, one cannot help giving the preference to their lines, or at least to the mean of both, between Surat and Cambay; which is placed in lat. 22° 16′ 45″, and lon. 72° 32′ 45″.

Having altered the bearing of the east side of the gulf of Cambay, it became necefsary, in order to preserve a proper width to the gulf, to give the west side a direction more oblique to the meridian, than appears in the original. At the same time, as it appeared but reasonable that Groapnaught Point should preserve the parallel of lati-

tude afsigned it in the original; the length of the western coast must neceſsarily be augmented, which it is, by 3 miles. The width of the gulf, in the original, from Swalley to Groapnaught, is $52\frac{1}{2}$ G. miles. I have allowed it $48\frac{1}{2}$ only.

It may be observed however that both D'Anville and D'Apres give even a more oblique direction to this coast than I have done, at the same time, that they give nearly the same direction to the eastern coast that Mr. Skynner does; and by this means, bring the head of the gulf almost to a point. D'Anville places Cambay 33′ of longitude west of Bombay, and D'Apres 25′. I have allowed only 7′ 15″. And Groapnaught Point, placed as above described, is in lon. 71° 42′ 30″; which is 4′ 30″ more eastwardly than it would have been, had Mr. Skynner been followed throughout. It is unpleasant to reflect that one is left in a state of uncertainty on a matter of considerable importance; for such the true bearing of the opposite coasts of a deep and dangerous gulf must be regarded: and here we find a whole point in dispute.

From Groapnaught Point, to Diu Head, I have followed Mr. Skynner's original bearing and distance; which gives 1° 50′ 15″ difference of longitude west; placing the westmost part of the Point in lon. 69° 52′ 15″. The latitude is 20° 43′.

From Diu Point to Cape Monze, situated beyond the mouth of the western branch of the Indus, or Sinde river, the bearing and distance is taken from a mean of three charts furnished by Mr. Dalrymple, and with the distance, corrected by the latitudes of Point Diu, and Cape Monze, the latter taken at 24° 45′, gives 4° 6′ difference of longitude; placing Cape Monze in 65° 46′. M. D'Anville places this Cape near a degree more to the eastward; and makes the longitude between it and Bombay 4° 57′, instead of 6° 52′, as given in my map: and this makes a great alteration in the figure of the coast between Surat and the mouth of the Sinde, or Indus: the peninsula of Guzerat being much larger than was formerly supposed, the gulf of Sinde (or Cutch) much smaller;

and the Delta of the Indus projecting into the sea, instead of receding from it.

The several charts of the western coast of the peninsula of Guzerat, and of the coast of Sinde, differ in a variety of particulars; and would make a minute discussion of them too tedious even for this Memoir; and besides, nothing appears in either of them to claim a preference. In the general bearing above given, the three charts differed no more, among themselves, than 2° 15 in bearing; but the charts of the mouth of the Sinde and the gulf of Cutch, differed so much that Mr. Dalrymple thought proper to publish them all separately, in order that every person might be enabled to judge for himself. On collating the names of the different mouths of the Sinde, one finds great contradictions; and it is very difficult to identify them in the several charts. The flatness and want of variety in the appearance of the coast, added to the sand-banks which keep navigators at a distance, and prevent their discriminating any minute objects that may occur, occasion these mistakes. The tombs alone appear to be the marks for the coast. The latitude of Ritchel I have taken at 24° 14′; and that of Caranchy or Crotchey, at 24° 52′.

All the particulars of the western coast of Guzerat, and the mouth of the Sinde, are copied from the abovementioned MS. and printed charts of Mr. Dalrymple's: and consequently the whole coast from St. John's Point to Cape Monze, is described from new materials.

I now return to Balasore.

From Balasore, eastward to Chittigong, the distance has been determined by the inland survey; and the figure of the coasts and inlets by Capt. Ritchie's sea survey. The difference of longitude between the towns of Balasore and Chittigong (or Islamabad) is 4° 53′ east; and, it is worthy of remark, that the distance by Capt. Ritchie's marine survey, agreed with the measurement on shore, to within two miles and a half.

The charts so late as the year 1752, represented the difference of longitude between these two places, to be only 3° 48′; that is, 1° 5′ lefs than the truth. And this diminution of the longitude, while the difference of latitude continued right, gave the sea coast between the mouths of the Ganges, a direction of two points, or 22½ degrees more northwardly than the truth; which doubtlefs occasioned the lofs of many ships, who trusted to the information.

From Islamabad, in longitude 91° 55′, latitude 22° 20′, the coasts of Aracan and Pegu take a S S E course to Cape Negrais, the extreme point of Pegu to the south-west; the latitude of which is under 16 degrees, and distance from Islamabad about 420 G. miles. The outline of this whole coast has been traced by Capt. Ritchie, under the same direction, and in the same manner, as the coasts on the west side of the bay. He made the difference of longitude 2° 32′ east from Islamabad; placing Cape Negrais in 94° 27′.* Mr. Dalrymple, who has taken uncommon pains to ascertain the bearing of this coast from journals, and a variety of sketches and remarks, makes the difference of longitude 2° 34′, or only 2′ different from Mr. Ritchie. The result of this laborious inquiry, corrected by a nicely-discriminating judgment, corroborates, in the strongest manner, Capt. Ritchie's calculation; and affords a degree of satisfaction next to that of an actual observation.

I mean to have it understood that Capt. Ritchie's chart of this coast, is to be taken only as a general outline, being imperfect as a coasting chart. Many particulars on this coast are taken from Mr. Dalrymple's collection, both printed and MS.: particularly, the river of Aracan, the east side of Cheduba, and the pafsage between it and the main; and a variety of particulars on the coast of Ava. Some of the names of places were also misconceived by Capt. Ritchie.

* The longitude of this Cape was reckoned by M. D'Anville only 93° 15′: so that the New Map increases the distance between the mouth of the Sinde (or Indus) and Cape Negrais, 2 degrees and 7 minutes of longitude.

Capt. Ritchie's latitude of Cape Negrais, or Pagoda Point, is more southwardly than it is commonly taken at, by 10 minutes; which I cannot account for, as his observations of latitude are generally exact. I have placed this Cape (by which I mean the south extremity of the coast of Ava) in 15° 57′, by the mean of 6 different accounts, varying from 15° 51′, to 16° 4′. Capt. Ritchie's was 15° 52′ 30″.

At this point, my materials for ascertaining the intermediate longitudes of places on the eastern side of the bay, fail me: and I have been under the necefsity, in a great measure, of substituting judgment for fact, between Cape Negrais and the next place of observation, Mergui: which place, as it is given by M. D'Apres in his new *Neptune Orientale*, is in 98° 20′ east longitude, or 3° 53′ east from Cape Negrais. M. D'Anville allows 4 degrees; which comes within 7 minutes of mine; but although we agree nearly in the aggregate, we differ widely in point of particulars.

The MS. charts that I have consulted, make the difference of longitude in question, 4° 30′ on a medium; which is 37′ more than I make it. M. D'Apres makes it 4° 19′.

The disagreement in particulars between M. D'Anville's account and mine, arises in the part between Cape Negrais, and the coast of Martaban. It happens that this coast lies in a direction so far from meridional, and at the same time the tides and currents of the several mouths of the Ava river, do so disturb and falsify the ships' reckonings, that the true distance can never be ascertained that way in the ordinary course of navigation. Plans of the Persaim and Syrian rivers, as high up as the cities of those names respectively, have been already published in Mr. Dalrymple's collection; and, fortunately, I have been able to obtain tracings of the continuations of those rivers (which are the two extreme branches of the Ava river) to the place where they separate from the main river, at about 150 G. miles from the sea. The bearings of the two branches intersect each other at an angle of about 60 degrees; and, there-

fore, by the help of the latitude, may be used in correcting the length of the coast between Negrais and Syrian. The Persaim, or Negrais branch, was traced by that accurate observer, Capt. George Baker, in his way to Ava in 1755. I have not been able to learn by whom the Syrian branch was traced; but by the orthography of the words in the map, the author appears to have been a Dutchman.

The result of these bearings, corrected by the latitude, as set forth in the Syrian map, gives difference of longitude from Negrais Point, to the mouth of the Syrian river, 2° 21′ east; which is about 10′ less than M. D'Apres makes it, and 21′ less than M. D'Anville. Some of the MS. charts make the difference still more.

The mouths of the Ava river, which form an assemblage of low islands, like those of the Ganges, are described from several MS. charts of Mr. Dalrymple's, collated with M. D'Apres' new chart.

From the mouth of the Syrian river to the coast of Martaban, in latitude 15° I have copied from the new chart of M. D'Apres, published a very short time before his death. The figure of the coast is quite new.

Between the aforesaid latitude and Tavai Point, our charts are very imperfect; but generally agree in giving the coast a direction of south, a very little eastwardly.

From Tavai Point to Mergui, the coast is taken from a MS. chart compiled by the late Mr. Howe.

Mergui is placed, as I have said before, according to M. D'Apres' observation: that is, in longitude 98° 20′; latitude 12° 9′.

All the remainder of the coast, to Junkseilon: and the whole Mergui Archipelago, is from M. D'Apres.

I NEXT proceed to the chain of islands that extend from Cape Negrais to Sumatra; and are known by the names of the Preparis, Cocos, Andaman, and Nicobar Islands.

Capt. Ritchie, after leaving Negrais, proceeded agreeably to his instructions, to describe the situation and extent of the islands that compose this chain.

None of them are more than 8½ G. miles distant from each other; so that he needed never to be more than 42 miles from land: and that but once during the voyage; that is to say, between the Little Andaman and the Nicobar Islands. In other places, the distance between the lands is commonly much leſs: so that the meridional direction of the course, and other circumstances, render this line of much use in correcting the longitudes, not only of the islands themselves, but of Sumatra also; and had it been continued, as was intended, to Acheen, would have answered the purpose completely.

Paſsing the Preparis and Cocos islands, Capt. Ritchie proceeded to Narcondam, to fix its position: then back again to Cocos; down the east side of the Great Andaman (which he found to be almost a degree of latitude longer than was before supposed), then up the west side of it, almost to the latitude of 12°: when finding the attempt to circumnavigate the island might prove fatal to the remainder of his work, he proceeded southward; describing the extent, figure, and positions of the Little Andaman and the Nicobars, till he came to the south point of the Great (or southmost) Nicobar. Here the wind suddenly changed to the south, and prevented him from determining the respective positions of the southern Nicobar and Acheen: which is the more mortifying, as one day's fair wind would have enabled him to accomplish it.

The result of this line of bearing is, that the south end of the Great Nicobar, is in longitude 94° 23′ 30″; that is, only 3′ 30″ west from Cape Negrais.

The position of Acheen Head, or King's Point (the N W point of Sumatra), has hitherto been deduced from its bearing and distance from Malacca, the nearest place of observation; and its longitude according to this deduction, is 95° 30′ according to M. D'Apres. Now the bearing of Acheen from Malacca, being in a direction of more than 60 degrees from the meridian, and the distance 450 G. miles; little reliance could be placed on the result of it, if it did not happen that the respective positions of the southern Nicobar, and of Pouloo Ronde (an island near Acheen), the one deduced from Negrais Point, and the other from Malacca, agreed nearly with their reputed bearing and distance from each other. For, of two MS. charts which I have examined, the one makes 1° 1′, the other 1° 2′ difference of longitude between them; and these being laid down apparently without any attempt to support a system, may be supposed to be agreeable to experiment. The bearings and distances in these MS. charts are

In one - S 56° E —— 72 G. miles.

And in the other S 56 E —— 75

And according to the deduced longitudes abovementioned, the bearing and distance is S 56 E —— 76

So that there cannot be any great error in the longitude of Acheen, as laid down in M. D'Apres', and in my map, if this sort of coincidence can be reckoned a proof of accuracy: a difference of a few miles, in the distance of 8 degrees, being much less than could be expected in such a series of deductions. M. D'Apres makes the bearing and distance between the south Nicobar and Pouloo Ronde S 57° 30′ E 97 G. miles; or difference of longitude 1° 22′, that is, 22′ more than the MS. charts. It must be observed, that he reckons the south end of this Nicobar 9 miles farther to the north than the truth; occasioned by his making the island so much too little in extent: for the north end is in its true latitude. Had the south point of the island been in its true latitude, the bearing of Pouloo Ronde would have been more eastwardly, and the distance

only 93, instead of 97: and if, on the contrary, he has enlarged his distance on the original bearing, to make it answer to the latitude, the original distance could have been only 85 miles.

I have said before that Capt. Ritchie went no higher up the west side of the Great Andaman, than about the latitude of 12°. The remainder of that coast, as well as the paſsage through the islands at the north end of it, is from a MS. chart lent me by Mr. Dalrymple; and which carries with it the greatest appearance of truth, on a comparison of the south and south-west parts of the Great Andaman in this chart, with the same parts in the chart of Capt. Ritchie.

Barren Island, and the rock on the east of Duncan's Paſsage, are from the remarks of Capt. Justice in 1771.

ISLAND OF CEYLON.

It happens that the ordinary tracks of British ships, to and from Ceylon, and the coast of Coromandel, are not calculated for determining the relative positions of Point Pedro and Point Calymere, the approximating points of Ceylon and the continent of India. Hence it is, that we are so ill informed, not only of their true situations with respect to each other, but also with respect to the parallel of latitude under which Point Pedro is situated.

By my observations, Point Calymere (the southern extreme of Coromandel) lies in 10° 20′ latitude, and by inference from Madras, in longitude 79° 54′ 30″. M. D'Apres places it 6 minutes more northwardly; and D'Anville 7 further south. The latitude of Point Pedro is also variously represented by the above geographers: I have taken it at 9° 52′.

In M. D'Apres I find the bearing and distance from Point Calymere to Point Pedro, to be - S 87° E 41 G. miles.

In D'Anville - - S 89 E 38

In a MS. chart, no name - S 46° 30′ E 40

I had an opportunity in 1764, of determining the position of Cow Island from Tondi, very nearly: I made it 10 G. miles west of Point Calymere, and 89 east of Tondi. Between Cow Island and Point Pedro, Van Keulen reckons 41½, and D'Apres and D'Anville, 42 miles of easting. This will place Point Pedro 31½ east of Point Calymere; or in longitude 80° 27′, and in bearing from Point Calymere E 43° 20′ S; 42½ G. miles distant. I have placed it in this situation accordingly; as thinking it not liable to any great objection.

The figure of the island of Ceylon is variously represented by different geographers. Van Keulen makes it too narrow in the swelling part; that is, between Batacola and Columbo; as is pretty evident from the longitudes shewn by the time-keepers of some of the commanders of the East India ships, and others. D'Anville and D'Apres in their maps of the island, agree much better with these observations.

Between the meridians of Calitoor and the east side of Ceylon in lat. 7° 40′, Van Keulen reckons the difference of longitude only - - - - - - 1° 46′

M. D'Anville - - - 2 1

M. D'Apres - - - 2 8

And by the time-keepers it is 2 12

However, until a regular series of observations by time-keepers are made by the same person, all round the island, we must despair of seeing the true figure of it, unleſs its coasts were surveyed. The casual observations which we are in poſſeſsion of, from different hands, will only aſsist us in fixing certain points of it; which being done, the general figure of the island must be collected in the best manner it can be done, from the charts existing.

The following are the observations of longitude taken on the south side of Ceylon:

Point de Galle, by Capt. Huddart	-	80° 1′ 30″*	
——————— Dundas	-	80 7	
——————— West	- -	80 17†	
The mean of these 3 accounts is	-	80 8 30	

Dundrahead by Mr. Topping's observation (worked to Pondicherry in lon. 80°) is in lon. 80° 39′: I reckon Point de Galle 28′ west from Dundrahead, therefore it should be by this account in 80° 11′.

Mr. Topping observed the longitude of the Great Baſsas also; so did Capt. Dundas: but as we are not well informed concerning the exact difference of meridians between them, and they being at least 1° 22′ distant, nothing in these observations will apply to Point de Galle.

There is certainly too much discordance between the three longitudes of Point de Galle given above; the mean of which is 80° 8′ 30″. As Anjenga and Cape Comorin were placed 3′ farther to the eastward than Capt. Huddart's observation warranted, in order to accommodate the differences between the two calculations, Point de Galle should be reckoned in 80° 11′ 30″. Mr. Dalrymple's time-keeper gave the difference of longitude between Anjenga and Point de Galle 3° 29′ 30″, which added to 76° 40′ (see page 19) gives 80° 9′ 30″.

If we consider the respective positions of Point Pedro and Point de Galle by the different geographers, we shall have the following result:

* Deduced from Bombay, which is reckoned in 72° 40′.

† Capt. West reckoned from Sadras, which I place in 80° 24′. He reckoned it 80° 19′; and of course, Point de Galle in 80° 22′.

Van Keulen places Point de Galle west of Point Pedro	15′ 45″
M. D'Apres	10
M. D'Anville	3
Mean of the three	8′ 55″ or 9′

And the longitude of Point Pedro being taken at 80° 27′, Point de Galle by this rule will be in 80° 18′.

On an occasion like this, where we are not likely to come exactly at the truth, since no one can pretend to say whether the longitude of Point de Galle be 80° 1′ 30″, or 80° 18″; I thought it better to ensure a certain good, at the hazard of a small mistake, than to sacrifice that advantage, by adhering to a result which in itself was problematical. In other words, I judged it better to preserve the general form of the island, and consequently the respective positions of the north and south points of it, as given by D'Apres; and which appear to me to agree best with the result of the observations of longitude, taken on different sides of it; than to change those relative positions, which must have been done, had Capt. Huddart's observation at Point de Galle been adopted. I have therefore placed Point de Galle 10′ west of Point Pedro (according to D'Apres); that is, in lon. 80° 17′. Had I adhered to the observations in respect of Cape Comorin, it would have been 80° 11′ 30″. The mean of all the observations and deductions, is about 80° 14′ 30″. The observations differ among themselves 14′ 30″. The latitude of this Point is 6 degrees; and of Dundrahead, the southmost point of the whole island, 5° 51′.

The observations at Dundrahead, were, by Mr. Topping, 80° 39′, and by Capt. Huddart 80° 23′. The Great Baſsas, by Mr. Topping 81° 41; by Capt. Dundas 81 30′. The variation in these longitudes, shew that a series of them by the same person, and the same time-keeper, is by much the most desirable.

The longitudes on the east side of Ceylon, by 3 different gentlemen; (viz.) Capt. Cumming, Capt. West, and Mr. Topping, do not disagree so much as those on the south side of the island. They are these:

						By construction.	
In lat.	7°	40′	Mr. Topping's longitude was	82°	2′	81°	58′
	6	33	Capt. West's - -	81	55	82	
	6	53	Capt. Cumming's -	82		82	2
	7	31	Ditto - - - -	82	1	82	1

Together with M. D'Apres' dimensions of the island (in the southern parts particularly), I have adopted his detail of the coast from Columbo to Vendelos Bay. From Vendelos Bay to Point Pedro, the coast in Van Keulen appears to be too nearly meridional, and his latitudes too much southwardly. Again, on the west side, from Columbo to Manar, I followed D'Apres' hearing, which is more north-eastwardly than Van Keulen's. Indeed it could not be otherwise, than that both the east and west coasts must have a greater degree of obliquity from the meridian, than Van Keulen represents: because he allows too little breadth to the south part of the island. In short, the general form of the island is D'Apres': but the particulars are collated with Van Keulen's and D'Anville's maps.

The distance from Mentole Point, on Ceylon, to Point Ramen on the continent, I take to be less by $11\frac{1}{2}$ G. miles, than Major Stevens supposed it to be in his chart; nor can it be otherwise, to reconcile it to my position of Cow Island.

The Maldive and Laccadive Islands are copied from M. D'Apres; save that the position of the northmost Maldive Island (called by the French *the head of the Islands)* is placed according to Mr. Topping's observations of latitude and longitude in 1785. He made the latitude of it 7° 5′, and the lon. 73° 4′; and when opposite to it on the north, he counted 32 islands; the furthest bearing S E by E.

SECTION II.

The surveyed Tract on the Side of BENGAL, *or that occupied by the Course of the* GANGES, *and its principal Branches, as far West as the City of* AGRA.

THIS extensive tract, which comprizes the soubahs of Bengal, Bahar, Allahabad, and Oude; a large portion of Agra and Delhi, and a small part of Orifsa, is bounded on the east by Afsam, and the dominions of Ava: on the south-east by the gulf, or bay of Bengal; on the south-west by an imaginary line drawn from the port of Balasore in Orifsa, to the city of Narwah; on the west by another such line drawn from Narwah, through the city of Agra, to Hurdwar, the place where the Ganges first enters the plains of Hindoostan; and on the north, by the first ridge of mountains towards Bootan. It is in length from the city of Agra, to the eastern confines of Bengal, upwards of 900 British miles; and in breadth from 360 to 240.

With respect to the particulars of this survey, which was executed between the years 1763 and 1777, it is unnecefsary to say more than that the distances were measured, and that they accorded with the observations of latitude and longitude; with the former minutely, and with the latter so nearly, that it was unnecefsary to make any correction.

Agra, by Claud Boudier's observation, is in -	78° 29′
Calcutta, by the mean of four observations -	88 28
Difference of longitude by observation -	9 59
By survey - - -	9 58

And Calpy on the river Jumnah, stands in the survey in lon. 80° 4′
And by the Rev. Mr. Smith's observations - - - 80 0

Agra, then, appears to be the most western point determined by the survey; and serves as a common point of union between the surveys on the east, and the routes furnished by various MS. maps, and itineraries, on the north, south, and west. By means of the survey also, a number of points are ascertained, which serve to set off cursory surveys of roads both to the west and south: such as Hurdwar and Ramgaut, on the north of Agra: and Gohud, Calpy, Chatterpour, Rewan, Burwa, and Balasore on the south.

As this tract contains the site of the famous city of Palibothra (or Palimbothra), as well as those of Canoge (or Kinnoge), and Gour, it may not be amiss to take some notice of them: as also of some of lesser note, such as Punduah, Tanda, Satgong (or Satagong), and Sonergong: all of which (Palibothra excepted) are mentioned either in the Ayin Acbaree, or in Ferishta.

Pliny is the only one among the ancients (as far as I know) that assigns a particular spot for the site of Palibothra; the rest only speaking generally of its situation, and as it appears by a discussion of particulars, contradicting one another. All are agreed that it was situated on the right bank of the Ganges (that is, *intra Gangem*), and at the confluence of a large river with it. This river was named *Erranoboas* according to Arrian (who had his intelligence from Megasthenes's journal), and was of the third degree of magnitude among the Indian rivers; and inferior to none but the Ganges and Indus. I cannot apply the name Erranoboas to any particular river. Pliny certainly says that the *Jomanes* (Jumnah) entered the Ganges by Palibothra, between *Methora* and *Clisobara*;* but it is equally true, that in another place he mentions the conflux of the Ganges and Jomanes, and in the very next article says that Palibothra is situated 425 miles below that very point of conflux. Strabo does not give the name of the adjunct river.

Palibothra was the capital of the Prasii, by the account of Megasthenes, who resided there; and was of very great dimensions,

* The different readings are *Carysobora*, and *Cyrisoborca*.

being 80 stadia in length and 15 broad. If we reckon these measures to produce 10 miles in length, and near 2 in width,* which for an European city, compactly built, would be reckoned enormous; yet it does not exceed the dimensions of some of the capital cities of the Indian soubahs or vice-royalties. The ruins of Gour in Bengal, are more extensive; that of ancient Delhi much more so. The plans of the Indian cities contain a vast proportion of gardens and reservoirs of water; and the houses of the common people consist of one floor only: of course, fewer people can be accommodated in the same compass of ground, as in an European city; and this may account for the enormous dimensions of Asiatic cities.

As Pliny's Indian itinerary (in Book VI.) enumerates the particulars of the whole distance between the Indus and the mouth of the Ganges; and particularizes the site of Palibothra; it could hardly be doubted that some very large city stood in the position assigned to it: but I had always a doubt of its being the capital of the Prasii † visited by Megasthenes. Late inquiries made on the spot, have, however, brought out this very interesting discovery, that a very large city, which anciently stood on or very near the site of Patna, was named Patelpoot-her (or Pataliputra, according to Sir William Jones), and that the river Soane, whose confluence with the Ganges is now at Moneah, 22 miles above Patna, once joined it under the walls of Patelpoot-her. This name agrees so nearly with Palibothra, and the intelligence altogether furnishes such positive kind of proof, that my former conjectures respecting Canoge must all fall to the ground: notwithstanding that Canoge was unquestionably the capital of a large kingdom from very early times.

I consider the above information as too clear and positive to require any proofs from ancient authors; and therefore the following

* The olympic stade can hardly be taken at a furlong, but probably at 200 yards. Then the dimensions will be about 9 B. miles in length, and 1¼ in width.

† The empire of the Prasii seems to have included most of the tract through which the Ganges flows, after it enters the plains of Hindoostan.

examination of Pliny's itinerary, is intended rather to shew his great accuracy in geographical subjects, than as a proof of the above position; although it may serve that purpose also. To use the words of a celebrated author, "Pliny's Natural History is one "of the greatest monuments of universal knowledge, and unwearied "application, now extant in the world."* That part of the itinerary, applicable to my purpose, is as follows:

From Taxila or Tapila, on the Indus (probably near the site of *Attock*),† to the river Hydaspes (the modern Chelum) - - -	120 Roman miles.
To the Hyphasis (*Beyah*) - - -	390
To the Hesudrus, probably the *Setlege* river	168
To the Jomanes (*Jumnab*) - - -	168
To the Ganges - - - -	112
To Rhodopa - - -	119
To Calinapaxa (a city) - -	167
To the conflux ‡ of the Jomanes (Jumnah) and Ganges - - -	225
To Palibothra - - -	425
To the mouth of the Ganges - -	638

It must first be observed of this itinerary, that it furnishes no means of comparing the *whole distance* between the Indus and the mouth of the Ganges, as shewn here, with that on the map; because the second article, namely, the distance from the Hydaspes to the Hyphasis, is obviously wrong, even if the text (which is very obscure) is to be taken at 390: for it cannot be more than 220 of Pliny's miles, unless the surveyor of Alexander's marches threw

* Blackwall.

† Taxila or Tapila, and the Indus, are mentioned as one and the same place by Pliny: *Ad flumen Indum et oppidum Taxila.* Book VI.

‡ Here we may remark, by the way, that if any capital city had stood at the conflux of these rivers, it is likely that Pliny would have taken notice of it.

into the account, the circuitous route to the city of Sangala, &c. after the Catheri or Cathei. So that the account, as far as it regards the *whole* distance, is vitiated; and we must therefore have recourse to *parts*. Taking therefore for granted, that the Beyah river is meant by the Hyphasis (or rather Hypasis), as I hope to prove satisfactorily in my observations on Alexander's march; and measuring on the map, along the line of the great road from the Panjab country to the mouth of the Ganges, the distance will be about 1140 G. miles: and as the itinerary in question gives the length of the same interval at 2022 Roman miles, the proportion of one of Pliny's miles to a geographic mile, will be as 56 to 100, in horizontal distance; or about $\frac{7}{10}$ of a British mile in road distance. This is certainly too short for the Roman mile of 1000 paces;* but the question in the present case, is not the actual distance, but the proportions of the intermediate parts of the road. The conflux of the Ganges and Jumnah, on the map, is 990 of Pliny's miles from the Beyah, and 1032 above the mouth of the Ganges: and the itinerary makes the length of the first interval 959, the other 1063; that is, Pliny's account places the conflux too far down by 31 of his miles, or about 17 G. miles. Nor is this difference at all to be regarded in the general question: for our ideas of the distance were much wider of the truth 20 years ago.

Palibothra he places 425 miles, or so many parts in 1063, of the distance from the conflux of the Jumnah to the mouth of the Ganges: and this is the point we are to attend to. Patna indeed, is only 345 of Pliny's miles below the present conflux; and this difference of 80 of Pliny's, or about 44 G. miles, however considerable it may appear to those who expect nice coincidences in such matters as these; does not, in my idea, lessen the general authority of the itinerary: because, if we admit only what it literally proved,

* M. D'Anville is of opinion that Pliny turned the Greek stades into miles, at the rate of 8 to a mile; and thus accounts for their shortness. M. D'Anville, who has gone deeply into the subject, thinks that it requires 1050 itinerary stades (of horizontal measure, I apprehend) to make a degree of a great circle. See his Eclaircissemens, p. 55.

Palibothra must still have been situated within 44 miles of Patna. And as the people there have a tradition that Patna stands on, or near, the site of Patelpoot-her, it rather proves to me either that there is an error crept into the copies of the itinerary; which notwithstanding, proves in generals as much as is required; or that the point of conflux of the Jumnah with the Ganges, has undergone a change. For although the point of conflux is not found in the very position in which it ought to be by the itinerary, yet Patna is nearer to the position aſsigned to Palibothra. It may appear to some, a violent way of reconciling disagreements, but it is no new thing for the rivers of India to change their course and place of confluence. I have in another place (Phil. Trans. vol. lxxi. p. 99.) taken occasion to observe that the Cosa river changed its place of confluence with the Ganges, which is now 45 miles higher up than it was. The Burrampooter has varied its course still more. And to come nearer to the site of Patna, the change in the conflux of the Soane, just now remarked: for the ancient bed of that river is yet traceable on the south of Patna. It would be unneceſsary to enter so far into a discuſsion of these differences, had not Pliny aſsured us that the distances were measured; and that by order of *Seleucus Nicator*.

We may observe that Arrian does not mention the name *Jomanes* in his book, although he does that of *Sonus*. And if we had no other authority than that paſsage in Pliny, which expreſsly says that the Jomanes, a river which paſses by *Metbora* (probably *Matura*), runs into the Ganges by Palibothra, we must have supposed that this city was seated at the conflux of the two rivers. But the itinerary says that Palibothra was 425 miles below this conflux. Pliny must therefore have meant another river, different from the Jomanes.

Strabo gives the distance of Palibothra above the mouth of the Ganges at 6000 stadia; and though we cannot fix the exact length of the stade, we can collect enough to understand that 6000 stades

laid off from the mouth of the Ganges would not reach far, if at all, beyond Patna.* Nor must we forget the paſsage of Arrian (in Indicis) in which Palibothra, the chief city of the Indians upon the Ganges, is said to lie *towards the mouths of that river*. But we ought not to omit, on the other hand, that Arrian quotes from Eratosthenes, the distance of Palibothra from the western extreme of India, which is said to be 10,000 stades, only: and that Ptolemy gives its latitude at 27°; both which particulars apply better to Canoge than to Patna. It is poſsible that both places may have been occasionally used as capitals of the Prasii, as we have known both Agra and Delhi to have been of Hindoostan in general, during the two last centuries.

Pliny's Palibothra, however, is clearly Patna: and it is probable that Strabo meant the same place, by the distance from the mouth of the Ganges.

Canoge,† the ruins of which are at present of great extent, was, in an early part of the Christian æra, the capital of Hindoostan; or rather of the principal kingdom along the Ganges. It is now reduced to the size of a middling town. It is situated on the right bank of the Ganges, near the place where the Calini river (or Callynuddi) joins it; and is poſsibly the place meant by Pliny for *Calinipaxa*. It is said to have been built more than 1000 years before our æra: and is mentioned in Ferishta ‡ as the capital of all Hindoostan, under the predeceſsor of Phoor, or Porus, who fought against Alexander. In point of extent and magnificence, Canoge answers perfectly to the description given of Palibothra; and in ſome respects to the local position given of it by Ptolemy and Eratosthenes, did not the above authorities aſsign it in a positive manner to Patna. The Indian histories are full of the accounts of its grandeur and populousneſs. In the ſixth century it was ſaid

* See page 52, where 1050 to a degree is the proportion fixed on by M. D'Anville.
† Latitude 27° 3', longitude 80° 13'.
‡ Before Christ 326 years.

to contain 30,000 shops, in which betelnut was sold (which the Indians, almost universally, chew, as some Europeans do tobacco). In A.D. 1018, it was seized on by the Gaznian emperors: at which time, it gave its name to the kingdom, of which it was the capital.

Gour, called also Lucknouti, the ancient capital of Bengal, and supposed to be the *Gangia regia* of Ptolemy, stood on the left bank of the Ganges, about 25 miles below Rajemal.* It was the capital of Bengal 730 years before Christ,† and was repaired and beautified by Acbar,‡ who gave it the name of Jennuteabad; which name, a part of the circar in which it was situated still bears. According to Ferishta's account, the unwholesomeneſs of its air occasioned it to be deserted soon after; § and the seat of government was removed to Tanda, or Tanrah, a few miles higher up the river.

No part of the site of ancient Gour is nearer to the present bank of the Ganges than four miles and a half; and some parts of it, which were originally washed by that river, are now 12 miles from it. However, a small stream that communicates with the Ganges, now runs by its west side, and is navigable during the rainy season. On the east side, and in some places within two miles, it has the Mahanada river; which is always navigable, and communicates also with the Ganges.

Taking the extent of the ruins of Gour at the most reasonable calculation, it is not leſs than 15 miles in length (extending along the old bank of the Ganges), and from 2 to 3 in breadth. Several villages stand on part of its site: the remainder is either covered with thick forests, the habitations of tygers and other beasts of prey; or become arable land, whose soil is chiefly composed of brick-dust. The principal ruins are a mosque lined with black marble, elaborately wrought; and two gates of the citadel, which are strikingly

* Latitude 24° 53′, longitude 88° 14′. † Dow 1st. 6. ‡ A. D. 1575.
§ This is Ferishta's account; but some of its present inhabitants told me that it was deserted in consequence of a pestilence.

grand and lofty. These fabrics and some few others, appear to owe their duration to the nature of their materials, which are less marketable, and more difficult to separate, than those of the ordinary brick buildings; which have been, and continue to be, an article of merchandize; and are transported to Moorshedabad, Mauldah, and other places, for the purpose of building. These bricks are of the most solid texture of any I ever saw; and have preserved the sharpness of their edges, and smoothness of their surfaces, through a series of ages. The situation of Gour was highly convenient for the capital of Bengal and Bahar, as united under one government; being nearly centrical with respect to the populous parts of those provinces, and near the junction of the principal rivers that compose that extraordinary inland navigation, for which those provinces are famed: and moreover, secured by the Ganges and other rivers, on the only quarter from which Bengal has any cause for apprehension.

Tandah, or Tanrah (called sometimes Chawaspour Tanda, from the original name of the district in which it was situated), was for a short time in the reign of Shere Shaw, in about 1540, the capital of Bengal, and became the established capital under Acbar in about 1580. It is situated very near to the site of Gour, on the road leading from it to Rajemal. There is little remaining of this place, save the rampart; nor do we know for certain when it was deserted. In 1659, it was the capital of Bengal, when that soubah was reduced under Aurungzebe: and Rajemal, Dacca, and Moorshedabad, appear to have successively become the capital, after Tanda.

Pundua, or Purruah, mentioned as a royal residence in Bengal, in the year 1353,* is about 7 miles to the north of Mauldah, and 10 from the nearest part of Gour. Many of its ruins yet remain; particularly the Addeenah mosque, and the pavement of a very long street, which lies in the line of the road leading from Mauldah to Dinagepour.

* Dow 1st. 340.

Satgong, or Satagong, now an inconsiderable village on a small creek of the Hoogly river, about 4 miles to the north-west of Hoogly, was, in 1566, and probably later, a large trading city, in which the European traders had their factories in Bengal. At that time Satgong river was capable of bearing small vefsels; and, I suspect, that its then course, after paſsing Satgong, was by way of Adaumpour, Omptah, and Tamlook; and that the river called the Old Ganges, was a part of its course, and received that name, while the circumstance of the change was fresh in the memory of the people. The appearance of the country between Satgong and Tamlook countenances such an opinion.

Sonergong, or Sunnergaum, was a large city, and the provincial capital of the eastern division of Bengal, before Dacca was built; but it is now dwindled to a village. It is situated on one of the branches of the Burrampooter, about 18 miles south-east from Dacca; and was famous for a manufacture of fine cotton cloths.

In some ancient maps, and books of travels, we meet with a city named *Bengalla*; but no traces of such a place now exist. It is described as being near the eastern mouth of the Ganges: and I conceive that the site of it has been carried away by the river: as in my remembrance a vast tract of land has disappeared thereabouts. Bengalla, appears to have been in existence during the early part of the last century.

It does not fall within the compaſs of my design to describe all the principal cities of Hindoostan, which alone would require a large volume; but it may not be amiſs to point out their general positions, and the relation in which they stand to the several provinces or states, in which they are situated. Most of the capital cities are already described as they were in the last century, in the books of travels of Thevenot, Bernier, Tavernier, P. de la Valle, &c. which are in every body's hands. Most of these cities have, I believe, very considerably declined since that time; owing to the almost continual wars and revolutions that have taken place since

the death of Aurungzebe; and which were sufficient to desolate any country that did not produce almost spontaneously; and of course, where the deficiency of population is quickly replaced.

Within the tract discufsed in the present section, the principal cities are, Calcutta, Moorshedabad, Patna, Dacca, Cofsimbazar, Mauldah, and Hoogly, within the Bengal provinces: Benares, within the district of the same name, under the British sovereignty: and Lucknow, Fyzabad, Oude, Jionpour, Allahabad, Bereilly, and Corah, subject to the Nabob of Oude, our ally: and Agra, late in the pofsefsion of *Nudjuff Cawn*. Generally speaking, the description of one Indian city, is a description of all; they being all built on one plan, with exceeding narrow, confined, and crooked streets; with an incredible number of reservoirs and ponds, and a great many gardens, interspersed. A few of the streets are paved with brick. The houses are variously built: some of brick, others with mud, and a still greater proportion with bamboos and mats: and these different kinds of fabrics standing intermixed with each other, form a motley appearance: those of the latter kind are invariably of one story, and covered with thatch. Those of brick seldom exceed two floors, and have flat, terraced roofs. The two former clafses far outnumber the last, which are often so thinly scattered, that fires, which often happen, do not, sometimes, meet with the obstruction of a brick house through a whole street.

Calcutta is, in part, an exception to this rule of building; for there, the quarter inhabited by the English, is composed entirely of brick buildings, many of which have more the appearance of palaces than of private houses: but the remainder of the city, and by much the greatest part, is built as I have described the cities in general to be. Within these 20 or 25 years, Calcutta has been wonderfully improved both in appearance, and in the salubrity of its air: for the streets have been properly drained, and the ponds filled up; thereby removing a vast surface of stagnant water, the exhalations from which were particularly hurtful. Calcutta is well

known to be the emporium of Bengal, and the seat of the Governor General of India. It is a very extensive and populous city, being supposed at present to contain at least 500,000 inhabitants. Its local situation is not fortunate; for it has some extensive muddy lakes, and a vast forest, close to it. It is remarkable, that the English have been more inattentive than other European nations, to the natural advantages of situation, in their foreign settlements. Calcutta is situated on the western arm of the Ganges, at about 100 miles from the sea; and the river is navigable up to the town for the largest ships that visit India. It is a modern city, having risen on the site of the village of Govindpour, about 90 years ago. It has a citadel, superior in every point, as it regards strength, and correctnefs of design, to any fortrefs in India: but on too extensive a scale to answer the useful purpose intended, that of holding a post in case of extremity; since the number of troops required for a proper garrison for it, could keep the field. It was begun immediately after the victory at Plafsey, which insured to the British an unlimited influence in Bengal: and the intention of Clive was to render it as permanent as pofsible, by securing a tenable post at all times. Clive, however, had no foresight of the vast expence attending it, which perhaps may have been equal to two millions sterling.

Hoogly is a small but ancient city on the same river as Calcutta, though on the opposite side; and about 26 miles above it. In the time of the Mohamedan government, it was the *bunder* or port of the western arm of the Ganges; where the customs or duties on merchandise, were collected. The French, Dutch, Danes, and Portuguese, have each of them a town and factory on this part of the river, and between Hoogly and Calcutta; and all within the extent of 10 miles along the river. The French settlement of Chandernagore, and the Dutch one of Chinsura, are both very neat and pretty large towns; and each of them on a better site than Calcutta.

Moorshedabad, situated also on the western arm of the Ganges, which is there very low in the dry season, is about 120 miles above Calcutta. It was the capital of the Bengal provinces until the establishment of the British power: and even long after, it was the seat of the Collector General of the revenues; being a more centrical situation than Calcutta. It is very large, but ill built; and in its plan so very irregular, that it is difficult to estimate the quantity of ground it stands on. It is a modern city, and does not contain any magnificent buildings, either public or private: nor was it ever fortified, except by an occasional rampart thrown up round it, on the Mahratta invasion in 1742.* This city is now decaying, especially since the removal of the Board of Revenue to Calcutta, in 1771.

Cofsimbazar is a small city, nearly adjacent to Moorshedabad, and was at all times the place of residence of the different European factors; this being the centre of their trade.

Mauldah is a pretty neat city, not far removed from the north bank of the Ganges, and on a river that communicates with it. It arose out of the ruins of Gour, which are in its neighbourhood. In point of general situation, it is about 70 miles to the north of Moorshedabad. This, as well as Cofsimbazar, is a place of trade, and in particular produces much silk.

Rajemal lies on the west bank of the Ganges nearly in the parallel of Mauldah, and about 20 miles from it; at the foot of the chain of hills which projects into the river at Siclygully and Terriagully. It is in a ruinous state, although the residence of the viceroy not 130 years ago; and has hardly the population of an ordinary market town at present. Its situation is romantic, but not pleasant: for in Hindoostan, the hills and eminences being always covered with wood, that beautiful swelling of the ground, which is so justly admired in European landscapes, is lost; and the fancy is

* See Introduction.

presented at best with nothing beyond a wild scene: which can only be relished by being contrasted with soft and beautiful ones. M. D'Anville considered Rajemal as being seated at the head of the Delta of the Ganges: but it is more than 30 miles above it.

Dacca is situated in the eastern quarter of Bengal, and beyond the principal stream of the Ganges, although a very capital branch of it runs under it. Few situations are better calculated for an inland emporium of trade than this; as the Dacca river communicates with all the other inland navigations; and that not by a circuitous, but by a direct communication: as may be seen by the plan of its environs, in the Bengal Atlas. It succeeded Sonergong, as the provincial capital of this quarter; and is the third city of Bengal, in point of extent and population. It has a vast trade in muslins; and manufactures the most delicate ones, among those that are so much sought after in Europe: and the cotton is produced within the province. Dacca has in its turn been the capital of Bengal: and that within the present century. There are the remains of a very strong fortreſs in it; and within these few years there was near it, a cannon of extraordinary weight and dimensions:* but it has since fallen into the river, together with the bank on which it rested.

Dacca is situated about 100 miles above the mouth of the Ganges, and 180 by the road from Calcutta. The country round it lying low, and being always covered with verdure during the dry months,

* As it may gratify the curiosity of some of my readers, I have here inserted the dimensions and weight of this gun. I took the measures very carefully throughout, and calculated each part separately. It was made of hammered iron; it being an immense tube formed of 14 bars, with rings of 2 or 3 inches wide driven over them, and hammered down into a smooth surface; so that its appearance was equal to that of the best executed piece of brafs ordnance, although its proportions were faulty.

Whole length - - -	22 feet	10$\frac{3}{4}$	inches.
Diameter at the breech - -	3	3	
——— 4 feet from the muzzle -	2	10	
——— the muzzle - -	2	2$\frac{1}{2}$	
——— of the bore - - -	1	3$\frac{1}{2}$	

The gun contained 234,413 cubic inches of wrought iron: and consequently weighed 64,814 pounds avoirdupoise: or about the weight of eleven 32 pounders. Weight of an iron shot for the gun 465 pounds.

it is not subject to such violent heats as Moorshedabad, Patna, and other places.

Patna is the chief city of Bahar, and is a very extensive and populous city, built along the southern bank of the Ganges, about 400 miles from Calcutta, and 500 from the mouth of the river. Having been often the seat of war, it is fortified in the Indian manner with a wall and a small citadel. It is a place of very considerable trade. Most of the saltpetre imported by the East India Company, is manufactured within the province of Bahar. It is a very ancient city; and probably its modern name may be derived from Pataliputra, or Patelpoot-her; which we have supposed above to be the ancient Palibothra.

Benares is the chief city of the district commonly known by that name (and which consists of the circars of Benares, Jionpour, Chunar, and Gazypour), but is more celebrated as the ancient seat of Braminical learning, than on any other account; although it be a fine city, and very rich and populous, and the most compactly built of any. It is built along the north bank of the Ganges, and is distant from Calcutta, by the road, about 460 miles. Its ancient name was Kasi: but there are no notices concerning it in the works of the ancient geographers. I think, if it had existed during the time of the Syrian ambaſsadors, Pliny would have noticed it, as he has done Methora (Matura) and Clisobara, which lay near the Jumnah river.

Allahabad is seated at the point of confluence of the two great rivers Ganges and Jumnah, and succeeded to Pryaug, or Praig. Acbar founded the present city, which he intended as a place of arms; as its situation is very important both as it respects the navigation of the two rivers, and the country of the Doab behind it. Allahabad is about 820 miles above the mouth of the Ganges, and 550 by land from Calcutta. It belongs to the Nabòb of Oude, but its fortifications will hardly resist the battering of a field piece.

Lucknow is the present capital of Oude, having superseded the late capital Fyzabad, on the occasion of the Rohilla and other conquests; which left it rather in a corner of the kingdom, as it is now constituted, and in that corner the farthest removed from the scene of busineſs. It is a very ancient city, and moderately extensive; but after the short account given above of the nature of the ordinary buildings, a city may very suddenly be augmented on its becoming a royal residence: and Fyzabad of course may have declined. A small river, named the Goomty, runs under Lucknow, and communicates with the Ganges; but this last river is at least 43 miles to the SW of Lucknow. With respect to Calcutta, it is distant by the nearest road, 650 miles; and about 280 from Delhi. All is one vast plain from Lucknow to the mouth of the Ganges.

Fyzabad lies on the river Gogra, a very large river from Thibet, and is situated about 80 miles to the eastward of Lucknow, and 560 from Calcutta. It is a very large city, and nearly adjoining to it, is the very ancient city of Oude or Ajudiah. Fyzabad was the capital of the Nabob of Oude, till within these few years; but it was an inconvenient situation, even before the Rohilla conquest.

Jionpour is a small city on the Goomty river, about 40 miles to the NW of Benares, and in the road from that city to Fyzabad.

Corah, or Corah-Jehenabad, is a small city in the Doab, or country between the two rivers Ganges and Jumnah. Both this city and Jionpour are within the Nabob of Oude's dominions.

Bereilly is the capital of Rohilcund, which was added to the dominions of Oude, in the year 1774. It is but a small city and situated about half way between Lucknow and Delhi.

The city of Agra,* as I have said before, is situated at the western extremity of the tract under discuſsion; and on the south bank of the Jumnah river, which is very seldom fordable. This

* Latitude 27° 15', longitude 78° 29' by Claud Boudier: 78° 28' in the map.

city appears to have been during the late century, and in the beginning of the present, the most splendid of all the Indian cities; and at this time exhibits the most magnificent ruins. About the year 1566, the Emperor Acbar, liking its situation, made it his capital; since which, it is often named Acbarabad. It was then a small fortified town; but it soon sprung up to an extensive well built city, regularly fortified according to the Indian method, and with a fine citadel of red free-stone. Perhaps it has seldom happened, that a city of such great extent and magnificence has declined so rapidly. If Ptolemy, by Agara, meant Agra, it is certainly a place of great antiquity; but he has not placed Agara in the situation where we should look for Agra. Biana or Baniana seems to have immediately preceded it, as the capital of the province now called Agra, and which was originally included in the kingdom of Canoge.

COUNTRIES
CAPTAIN WILLIAM KIRKPATRICK
MAKRAN

Scythia
Scythia

SECTION III.

The Tract occupied by the Course of the River INDUS *and its principal Branches: with the adjacent Countries on both Sides, from the Mountains of* CABUL *and* CASHGAR, *to the Cities of* AGRA *and* AGIMERE.

THIS part comprehends in general the soubahs or provinces of Cabul, Cashmere, Lahore, Moultan, and Sindy; with the northern parts of Agimere, and the western parts of Agra and Delhi: and is about 750 B. miles in length from N E to S W; and from 750 to 350 in width. It is bounded on the east by mount Sewalic, and by an imaginary line drawn from Hurdwar to Agra; on the south by the great road leading from Agra to Agimere, and by the river Puddar; on the west by the Arabian sea, and Persia; and on the north by Balk, Badakshan, and Cashgar. But as the original map of Hindoostan is not extended so far to the N and N W as these limits imply; and as much valuable information concerning this tract, has been communicated since the publication of the former edition of this work; an appendage to the original map, on a similar scale, is here given. To this the reader is referred for an explanation of what belongs generally to Hindoostan, in this Section; as well as to another, on a smaller scale, for its connexion with Persia and Tartary.

Delhi, the nominal capital of Hindoostan at present, and the actual capital during the greatest part of the time since the Mahomedan conquest, has its position determined by observations of latitude and longitude; which observations accord both with the maps, and with the popular estimation of its distance, from the nearest points in the surveyed tract, mentioned in the last Section.

We first hear of Delhi, as the capital of Hindoostan, about the year 1200. It is reported to have been founded by Delu, * about 300 years before our æra; and I believe should properly be written *Debly*. Although a more extensive and populous city than Agra, it was not so well built. Shah Jehan, grandson of Acbar, and father of Aurungzebe, made this city his residence, and directed it to be called Shahjehanabad; and by this kind of vanity, it happens, that most of the Indian cities have a plurality of names: a practice very common in Hindoostan; to the utter confusion of historic records, and no leſs injustice to the original founders.

It is difficult to ascertain the true measure of extent of this city, which was said to contain, during the latter part of the last century, two millions of inhabitants. It is certain, that the account given by Bernier, who had good opportunities of being well informed, and who deserves the greatest credit for veracity, does not justify so high a calculation of its inhabitants. His account was indeed written in 1663, only four years after the acceſsion of Aurungzebe: and it is well known that under his reign, both the empire and capital were greatly augmented. Bernier, I say, estimated the circumference of Delhi at three leagues only, reckoning what was within the fortifications; besides which, he describes several suburbs, but altogether, no extraordinary extent for a capital city in India. He describes Agra as being considerably larger. After the plunders and maſsacres that it has been subject to, since the decline and downfall of the Mogul empire, we may expect it to be reduced very low: and accordingly, it is spoken of by late travellers as a city of moderate extent; and even for an Indian city, very ill built.

Claud Boudier found the latitude of Delhi to be 28° 37′; and its longitude 77° 40′. A MS. map communicated by my friend Mr. Hastings, and which includes some principal roads in the Dooab,

* Ferishta. The Ayin Acbaree says that the ancient name of Delhi, was Inderput.

between Furruckabad, Matura, Anopesheer, and Delhi; gives 51 G. miles of westing from Anopesheer, the nearest point in the Bengal survey, to Delhi; and 16 of northing: and this agrees perfectly with the observation of longitude, and comes within one minute of the latitude. Delhi is also 40 computed coſes from Ramgaut, another point in the survey: but this would place it four miles further to the east than the observation gives. It is placed according to the result of the observation, and the distance from Anopesheer.

Beyond Delhi, westwards, there are no points determined mathematically, by which the length and direction of the routes can be ascertained with such exactneſs as on the east of this point: but we are left to rely either on the reports of computed distances; or of measured ones, where, for want of a knowledge of their inflexions, we can only approximate the quantity of the direct distance, by the application of a general rule, or canon. To the list of *data*, however, must be added the latitudes and longitudes of the tables of NASEREDDIN and ULUG BEIG; which although perfectly satisfactory, as they respect the whole interval between Syria and India, do not always agree in particulars. But we shall find them accord with the geographical construction, in a sufficient number of points, to satisfy the reader that there is no violent disagreement in the chain of positions.

Sirhind is the first capital point, beyond Delhi, that I have any good authority for placing. In point of general situation, it is about midway between Delhi and Lahore. By the favour of my friend Col. Polier, I am poſseſsed of a map of the countries situated between the upper part of the course of the Ganges, and the rivers of Panjab; and between the northern hills, and the road leading from Delhi to Batnir. This map was constructed by an European gentleman, whose name I am unacquainted with: but Col. Polier aſsures me that the routes between Delhi and Sirhind were drawn from the gentleman's own observations on the spot: and this part

is particularly distinguished from the rest, which were drawn on the authority of others: but which are, notwithstanding, the best of their kind, as far as I have had an opportunity of checking them. The scale is in cofses, of which the author allows 69,3 * between Agra and Delhi; which interval, on the authority of Capt. Reynolds, I have taken at 98,3 G. miles of direct distance; and by this proportion, the cofses of the map are to be reckoned at 42,3 to a degree. (See page 5)

In the map, the bearing of Sirhind from Delhi, is N 33° 15′ W; the distance 105 † of the abovementioned cofses: by which Sirhind falls in lat. 30° 41′ 30″; lon. 1° 34′ W from Delhi; or from Greenwich, 76° 6′. Its latitude is unluckily omitted in the printed copies of the Ayin Acbaree; but as a presumptive proof of the truth of its parallel, Shahabad, in the province of Sirhind, falls by construction in 30° 18′; and Thanasair (or Tannasar) in 30°; which are given at 30° 12′, and 30° 10′, respectively, in the Ayin Acbaree. And what, moreover, I consider as an irrefragable proof of the general accuracy of the position, is, that Mustaphabad, which stands in Col. Polier's map at 42 cofses, from Sirhind towards Hurdwar, is by Bernoulli's account (Vol. I. p. 146, 147) 46 cofses from Hurdwar: by which the interval between Sirhind and Hurdwar should be 88 cofses: and it is actually 90 by the construction.

Sirhind is a very ancient city; but like most of the Indian cities, has greatly declined. Between it and Delhi, are extensive plains, within which are situated the towns of Panniput, and Carnawl, famous for great battles, both in ancient and modern times.‡ The reason of it is, obviously, the nature of the country; a vast plain,

* Thevenot says that there are 69 or 70 turrets (i. e. mile-stones) between the two places: and indeed, the distance is ordinarily reckoned 70, to 71 cofses. Lieut. William Stewart, a gentleman of considerable merit, and whose ingenuity, perseverance, and zeal, is likely to promote the interests of geography, measured the road distance, and found it to be 137½ statute miles between Agra and Delhi. If 71 cofses were reckoned on the same road, each common cofs would be 1,94 B. miles, of road distance.

† The computations vary from 99 to 105 cofses.

‡ Near to Tannasar and the lake Koorkhet, places of Hindoo worship, is the scene of the

situated at the mouth of a pafs: for such the country immediately on the west of Delhi may be considered to be, shut up by the mountainous and close country of Mewat and Agimere on the one hand, and by the Jumnah river on the other: and whether Delhi, Agra, or Canoge, was the capital, this was the road to it from Tartary and Persia, the original countries of the conquerors of Hindoostan.

The course of the Jumnah river, above Delhi, to the neighbourhood of the hills, is determined by Col. Polier's map; as are most of the positions in that part of the Dooab:* and they accord generally with the notices in Bernoulli. The site of the very ancient city of Husteenapour, is, by this map, and by the report of M. Bernoulli, near the western bank of the Ganges, 38 G. miles below Hurdwar, and on the north-east of Delhi. The Dooab appears to grow much narrower as it approaches the hills. Capt. Kirkpatrick informs us, that the province of Doon, or Down, occupies the space at the foot of the mountains that extend from the Ganges to the Jumnah; and that its length is only 20 cofses: that is, royal cofses of $2\frac{1}{4}$ B. miles, and upwards. Mr. Forster's route lay within the mountains, and his report corresponds nearly with this; so that 40 or 41 G. miles, in direct distance, is the utmost that can be allowed for the breadth of the Dooab, in this place: and it being so much wider below, the course of the Jumnah within the mountains must be from N E to S W: and it is indeed highly probable, that it should run nearly at right angles with the line of direction of the mountains, as they rise above one another in a series of ridges; of which the highest appears to be the snowy one, lying behind Sirinagur. If the Jumnah springs from the south side of this ridge, its course would be limited to about 90 miles, from its source to its entry on the plains. It

war of the MAHABARUT (an episode of which has been lately translated from the original Sanscrit, by Mr. Wilkins), so that this ground, which is not far from Carnawl and Panniput, has been the scene of war in all ages; poetically, as well as historically.

* See an explanation of the term Dooab, in the Introduction, page cxvi.

is singular that no notice should be taken of the place of its source, in the Ayin Acbaree; when those of the rivers of the Panjab are so particularly described. But the Panjab rivers all spring from the south-west of the snowy ridge: and may we not conclude from this silence, and from the bulk of the Jumnah where Mr. Forster crofsed it (for he says it was as wide as the Ganges was, within the hills; and this he states to be 200 yards), that it really has a more distant source, for the Setlege at Bullauspour was only half the width of the Jumnah?

Between Carnawl and Sirhind, four streams, or rivers, crofs the great road. Two of them are the Caggar (or Kenker), and the Sursooty (or Sereswatty), and the others have no names in the MS. maps. The first is taken notice of in the Ayin Acbaree, as one of the leſser streams in the soubah of Delhi; and as paſsing on the west of Tannasar, a celebrated place of Hindoo worship. The second paſses between Umballa and Sirhind; and the rest between the two first-mentioned ones. It is probable, from circumstances, that there may be others, although deemed too insignificant to merit notice. All these streams run to the south, or south-west; and probably mix either with the Indus, or Puddar: though I formerly supposed them to run to the S E into the Jumnah. I had also, with M. D'Anville, supposed the Caggar to be the *Hesudrus* of Pliny; situated half way between the *Hyphasis* and *Jomanes:* but having now discovered the Beyah to be the river meant by the ancient Hyphasis, there can be no difficulty in pronouncing the Setlege, or Suttuluz, to be the Hesudrus; as it answers in point of proportional distance.

It appears from Ferishta (Dowe I. 329), that on the west of Sirhind, a small rivulet named *Selima*, ran to the south, towards Sunnam, or Soonam (a well-known place, about 60 miles to the S W of Sirhind): poſsibly this may be the same with the *Jidger*, often mentioned by Ferishta; and which may be referred to this quarter. And as Ferose drew a canal from the *Setlege* to the *Jidger*,

one might expect those rivers to lie next each other, of course. What farther strengthens this opinion, in my mind, is, that Ferose is said to have turned a larger rivulet, that originally ran into the Setlege, into a smaller one (the Selima) that ran towards Sunnam (Dowe I. 329). I should almost conclude, that the canal from the Setlege, led into these confluent waters. Before we proceed finally to attempt the description of the courses of the famous canals of Ferose, it will be neceſsary to fix, as geographical points, the places near to which the canals are supposed to paſs.

Samanah, or Semana, a town of some note, is placed on the authority of Col. Polier's map, about S by W 40½ G. miles from Sirhind. This place is of considerable importance to the geographical construction; it being the first point that can be recognized in the march of Tamerlane's army, after that conqueror left Batnir. Sherefeddin reckons it 52 coſses from Panniput; and in Col. Polier's map it is about 50. It is situated in the circar of Sirhind; and is bordered on the south by Hiſsar, which has for its capital Hiſsar Ferozeh, celebrated on occasion of its being founded by Sultan Ferose III. as well as for its canals: for the country between Delhi and the Panjab, being scantily supplied with water, the Emperor Ferose III. undertook the noble as well as useful task of supplying it better; and at the same time meant to apply the water so furnished to the purposes of navigation. Capt. Kirkpatrick's friendly and well-directed attention, has enabled me to give a general idea of Ferose's plan; although certain parts of it are yet obscure, for want of knowing how to apply the names of the rivers, and water courses, mentioned in Ferishta.

The position of Hiſsar Ferozeh, is clearly to be collected from Capt. Kirkpatrick's MSS. aſsisted by Col. Polier's, and Bernoulli's notices. According to Bernoulli, Hiſsar is 60 coſses to the westward of Delhi: and it is also 40 from Sarsa, E S E, according to Kirkpatrick. Sarsa appears also in Polier's map, at 98 coſses from Delhi; which will be found to agree, considering that Hiſsar

lies out of the direct line. Kirkpatrick also makes it to be 80 common cofses from the outlet of the canal, that leads from the Jumnah, by Sufedoon, to Hifsar; and Sufedoon being 30 royal cofses from that outlet, the complement, equal to 54 G. miles, should be the distance of Hifsar from Sufedoon. And this last place is marked in Polier's map, at 20 G. miles W by S from Panniput.

Hansi, a town whose proximity to Hifsar, has occasioned the latter to be often named *Hansi-Hifsar*, lies on the canal from the Jumnah, at 10 cofses from Hifsar, to the N E. This place is also 18 from Mahim; 30 from Dadari; both which places appear in Col. Polier's map. And Hansi, thus placed, adds confirmation to the position of Hifsar: for according to a map communicated by Col. Murray, Hansi ought to stand 8 or 9 cofses S W of Jind, or Juneed; and this is the position that Hansi actually takes in Col. Polier's map, when placed as above, in respect to Mahim and Dadari.

Again, Capt. Kirkpatrick gives the distance of Hansi from Bahadernagur ($11\frac{1}{2}$ cofses W of Delhi), circuitously through Rohtuk and Mahim, at $46\frac{1}{2}$ cofses; or at $57\frac{1}{2}$ from Delhi. And these places being also in Col. Polier's map, we are enabled to ascertain the direct distance, by allowing for the inflexions of the road, by its paſsing through those places.

Hifsar being thus satisfactorily placed, I proceed to the account of it, and of its canals. The site of this city and fortreſs was originally occupied by two villages, named Great and Little Luddas; they stood in the midst of a sandy desert, and were so ill supplied with water, that it was sold to the travellers who paſsed this way from Persia to Delhi. It was to remedy this defect in the city which Ferose proposed to build here, that he caused canals to be drawn to it, as we have seen above. The city and fortreſs were built of stone, brought from the neighbouring hills of Nosa, or Loosa; and they were completed in two years and a half; all the omrahs aſsisting in the work.

It appears, that previous to the building of Hifsar, Ferose Lal made a canal from the Jumnah, near the northern hills, to Sufedoon, a royal hunting place; for the purpose of supplying it with water. Sufedoon is about 20 G. miles to the westward, or W by S, of Panniput. This canal was in length 30 royal cofses, or full 60 G. miles; and it paſsed by Carnawl and Toghlukpour. After the foundations of Hifsar were laid, he drew two principal canals to it; one of which was a prolongation of the canal of Sufedoon, the whole extent of which was then 80 (common) cofses, or about 114 G. miles. Perhaps it may be proper in this place to mention, that Shah Jehan, about the year 1626, not only repaired and cleansed that part of the canal between the hills and Sufedoon, but prolonged it, by a new cut, to Delhi; an additional length of full 60 G. miles; and this prolongation obtained the name of *Nehr Behisht*, or the canal of *Paradise*.

The other principal canal, was drawn from the Setlege river, to Hifsar Feroseabad. The outlet and course of this canal is not so clearly defined as the other: Capt. Kirkpatrick, to whom I am indebted for the information concerning Hifsar and its canals, had it from a history of Ferose, written by *Shumse Suraje*, soon after the death of that great monarch, which happened in 1388. Shumse Suraje says, that the canal was made from the *mouth of the Setlege:* which Capt. Kirkpatrick concludes to mean the confluence of that river with the Beyah: for, after the meeting of those rivers at Feroscpour, the name of Setlege is no more heard of (above Moultan at least), that of *Kerab* being the name of the confluent waters. And this would seem to be corroborated by Ferishta, who says, that in the year 1355, Ferose went to Debalpour, where he made a canal of 100 *miles* in length, from the *Setlege* to the *Jidger* (Dowe, vol. I. p. 327). Concerning the identity of the Jidger, I have before expreſsed an opinion (page 70): conceiving it to be a stream that ran by Sirhind and Soonam. What follows in Ferishta, as translated by Dowe, I confeſs I do not well com-

prehend. "He [Ferose] drew soon after, a canal from the Cag-
"gar, paſsing by the walls of Sirsutti, and joined it to the river of
"Kera; upon which he built a city, named after him Feroseabad.
"This city he watered with another canal from the Jumnah.
"These public works were of prodigious advantage to the adja-
"cent countries, by supplying them with water for their lands,
"and with a commodious water-carriage from place to place."
It may, poſsibly, be a jumble of two sentences, which related to different cities, together: the river *Kera*, and *Feroseabad*, may relate to the city of Ferosepour, at the conflux of the Setlege and Beyah: and the canal from the Jumnah, to Feroseabad, a city founded by Ferose, in the vicinity of old Delhi. Capt. Kirkpatrick remarks an obscurity in the text of Ferishta in this place.

I confeſs I have a different idea of the course of the western canal, from that derived from the words of Shumse Suraje; and should suppose the outlet of it, from the Setlege, was nearer to Ludhana than to Ferosepour; because, 1st. Considering the course of the Setlege, the level of the country between it and the Caggar, or the Jidger, would be against a canal cut from Ferosepour; especially when the waters were low. 2d. I am informed by Col. Polier, that the lands between the Setlege and Batnir lie very high, in the nature of an elevated plain; so that water is only to be had from exceeding deep wells: the nature of such a country is consequently against a canal on a level section. And, 3d. The rivers Setlege and Caggar diverge in their courses to such a degree, that the extent of a canal, in the lower part, would be almost double the length required.

But although the precise geography of these canals may not be understood, we can be under no difficulty concerning the general scope of Ferose's design; which was to distribute water through a large extent of dry, sterile country, with a view to fertilize it; and also for the purposes of water carriage. That he, in a great degree, accomplished the *former*, appears by the account of Shumse

Suraje; the substance of which is communicated by Capt. Kirkpatrick:* but concerning the *latter*, we have no other information than that contained in the above quotation from Ferishta. Neither the breadth, or the depth of the large canals, are mentioned by either historian. That which conducted the water from the hills to Sufedoon, is said to be about four yards in breadth.

Whether this grand design of Ferose's was completely executed, I have no means of knowing. Probably, as we have heard so little of the western canal, it might never have been rendered adequate to the purposes of navigation. Had it been completed, it must have ranked with the greatest works of this kind: we should then have seen two capital rivers, which traverse a large part of southern Asia, which enter the sea at the distance of 1500 British miles asunder, and which stretch out their arms, as it were, to meet each other, united by art; and those, by nature, to a third; so as to form an uninterrupted inland navigation from the frontiers of China to those of Persia!

The distance between the navigable parts of the Jumnah and Setlege, is about 105 G. miles, in a direct line: but according to Ferose's plan, it might be 240. It appears that one of the branches of the eastern canal led into the Jumnah at Kungipara.

The length of this disertation on the canals of Ferose, may posibly appear tedious to many; but improvements of this kind occur so seldom in the history of Hindoostan, where barbarous conquests and masacres are oftentimes the principal subject, that they are dwelt on with pleasure whenever they appear: and we

* Besides the main canals that have been mentioned, it seems that several others were cut, which united them in different parts, and in different directions. The banks, both of the main canals and their branches, were covered with towns: such as Juneed (the Jind of Polier's map), Dhataret, Hansi, and Toghlukpour. Ferose, by sanction of a decree of the cazees, assembled for the purpose, levied a tenth of the produce of the lands fertilized by these canals; which he applied, together with the revenue yielded by the lands newly brought into cultivation, to charitable uses. The lands of Ferozeh, which before had produced but one scanty harvest, now produced two abundant ones.

This circar (Hisar-Ferozeh), ever since the conquest of Hindoostan by the Moguls, has constituted the personal estate of the heir-apparent of the empire.

[*Capt. Kirkpatrick's MSS.*]

have only to regret on the present occasion, that the description of them is so obscure.

Batnir, or Batnair, is the extreme point westwards, in Col. Polier's map. This is a most useful point in the geography of Tamerlane's march from the Panjab; being the intermediate and only point between Adjodin and Samanah. How its position, which is 30 G. miles N N W from Sarsa, and 72 south-westward from Samanah, was obtained, we are not told: however, it will be found to accord with the march of Tamerlane; and may therefore be supposed to rest on the authority of the computed distances from Samanah and Sarsa, to Batnir, and may be the result of recent inquiries.

Major Brown informs us, that Batnir is also called Batinda, by the people of the Panjab; and that it is situated in a country famous for pastures, and fine horses. On the W and N W, lies the desert described by Sherefeddin; and which appears to extend to the borders of the Setlege.

Sursooty must stand on the N W of Hifsar; and south by east from Batnir: for it was at the end of Tamerlane's third march from Batnir towards Samanah; and yet was four marches from the latter; whence, by the direct distance between Batnir and Samanah, which is only 72 G. miles, Tamerlane's march must make a deep curve to the east, or S E: for two of the seven marches are said to amount to 32 cofses; and as he had only horse with him, the remainder were probably longer than ordinary marches. A MS. map describes the junction of the Sursooty and Caggar rivers: probably this junction is formed above Sursooty town; for Tamerlane had not crofsed the Caggar when at Sursooty; and the Sursooty river lay beyond the Caggar. I conclude, therefore, that the town of Sursooty stood on the banks of the confluent rivers; perhaps nearly equidistant from Hifsar and Batnir, and little more from Samanah. Tamerlane's invasion was about 40 years posterior to the time of Ferose's improvements:

but Sherefeddin is silent on the subject; from all which I conclude that the fort of Ferozeh, to which Tamerlane came the 2d day from Batnir, cannot on any account be that of Hifsar-Ferozeh.

On the west of Hifsar and Batnir, our knowledge, both geographical and political, is very much confined. Timur's (or Tamerlane's) route from Moultan to Batnir, the course of the Caggar river, and the road from Agimere to Jefselmere, is all that we have towards filling up so large a void. The first is from Sherefeddin; the others from Mr. Hastings's, and Col. Popham's MS. maps.

The common boundaries of Agimere, Delhi, and Moultan, we have no means of ascertaining: nor is the Ayin Acbaree particular enough on this subject, to lend any afsistance towards it.

Mewat, or the hilly tract lying on the west of the Jumnah, between the parallels of Agra and Delhi, as well as the northern and eastern parts of Agimere, which are mountainous also, have their geography much improved by the MS. maps communicated by Mr. Hastings, and Col. Popham. There is little to be said on the subject of the construction of these parts. Agimere, which is the primary point that determines the parallel and scale of the western parts, will be discufsed in the next Section, to which it properly belongs: the positions on the north and east of it, are taken chiefly from the MSS. just mentioned.

Jaepour, or Jaynagur, the capital of one of the Rajpoot princes in the eastern quarter of Agimere, has its longitude given by Claud Boudier, at 76° 9′, or 2° 19′ west from the city of Agra. All the MS. maps that I have consulted, place it very differently: and I find I cannot allow a greater difference than 1° 55′, without rejecting the scales of all the MS. maps; which, as they are formed from the difference of latitude, would be absurd. Perhaps the numbers in Claud Boudier's table, are not right: M. D'Anville has them at 76° 5′ in the Eclaircifsemens, which is still wider from probability.

It appear by M. D'Anville, that the Rajah of Jaepour (by name Jefsing) had erected two observatories, one in his newly built capital of Jaepour (which is about a league from Umbeer, or Ambeer, the ancient capital), the other in one of the suburbs of Delhi. Father Claud Boudier, at the rajah's request, visited the former of these observatories about the year 1732: and I think it probable that we are indebted to the rajah's afsistance for some others of the observations made by Claud Boudier; particularly those at Agra and Delhi. The latitude of Jaepour is 26° 56′; and M. D'Anville, in his *Antiquité de l'Inde*, reckons it 50 leagues from Delhi, which accords well with my idea of the distance between them.

The MS. maps which I have mentioned as being communicated by Mr. Hastings and Col. Popham, together with others formerly in the pofsefsion of Col. Muir, and since his death * obligingly communicated by my friend Mr. Bensley, of the East-India Direction, are corrected in bearing and scale by the primary points of Agra, Delhi, and Agimere; but only a very trifling alteration was required. It may be observed, in respect of the new matter contained in these communications, that a great number of places appear, that were familiar to us, as well in the history of former times, as in the account of recent transactions; but which we could not, heretofore, refer even to any general situation in a map. Still, however, much is wanting to render in any degree perfect, the geography of the tract in question, both as to mathematical exactnefs, and to relative description: in particular the latitudes and longitudes of such places, as from their being a kind of centre, from which a number of roads iffue, may be regarded as *primary points*, in the geographical construction. Until these are procured, we must be content to remain in ignorance con-

* It is probable that the severe indisposition to which Col. Muir was constantly subject, from the moment of his arrival, to the time of his death, left him no leisure to recollect that such materials were in his pofsefsion. This excellent officer, and most worthy character, died in 1786.

cerning many curious particulars of Indian geography; and satisfy ourselves with having the situations of places that are the most interesting, either from having been the subjects of history, or as being connected with the politics of the present times.

Lahore is the next point, in order. This is a city of high antiquity in the Panjab, and is situated on the great road leading from Delhi to Persia, and Samarcand. For its geographical position, I have both its latitude and longitude from the tables of Ulug Beig, and Nasereddin; and also a great number of itineraries and other notices, respecting the roads between it and Sirhind. But some of the itineraries are defective, through omiſsions; others too obscure to be followed throughout. However, by a careful analyzation of the particulars of each, and by a comparison of the corresponding articles throughout, it appears that 93 coſses of the common kind, may be taken for the distance of Lahore from Sirhind, by the road of Ludhana and Sultanpour, which is supposed to be the direct one. And of these, 52 are to be reckoned between Sirhind and Sultanpour; 41 between the latter and Lahore.

A Persian MS. map of the Panjab (of which more will be said in the sequel) gives for the distance of Rahoon from Lahore, 74 coſses: and Rahoon being 22 from Sirhind, by the road of Machiawara, (Bernoulli, Vol. I. p. 113, 146) this account allows 96 coſses.

In the Ayin Acbaree, the number of coſses between the Panjab rivers (Vol. II. p. 182) is faulty in the particular between the Beah and Rauvee; for no more than 17 are given, when most accounts allow more than 30 in the line of the route, between Sultanpour and Lahore. Besides Firosepour, which lies at the conflux of the Beah and Setlege, and nearly opposite to Lahore, is 30 coſses from that city (Kirkp.MSS.). Mr. Forster also allowed about 30 coſses from Ray Gaut on the Beah, to Biſsooly on the Rauvee. Poſsibly 27 might be meant, in the Ayin Acbaree, for the breadth of the space between the two rivers, directly acroſs: in which case,

no leſs than 33 can well be allowed on so oblique a line as the road from Lahore to Sirhind makes. And the space between the Beah and Setlege being 50 coſses in the same book, we have 77 for the two *Doabehs*, or space between the Rauvee and Setlege: and if Machiawara be the point reckoned to, on the latter, 14 more must be added to make up the distance to Sirhind (Bern. Vol. I. p. 146), and the sum total is 91.* But laying no streſs on this last calculation, I shall consider the two former ones only. And it must be allowed that they come very near to each other; the one being 93, the other 96 coſses: and the latter, the Rahoon road, is supposed to make a small angle or bend to the north, which would neceſsarily make it longer than the road by Ludhana. I should, however, had the difference been more considerable, give the preference to the result of the simple calculation, through Rahoon, to the compound one through Ludhana and Sultanpour; as being in its nature leſs subject to error: but, in effect, if we consider the quality of the materials, and the various channels through which they are transmitted to us, it may be said, that *all* the different accounts, in a general view, corroborate, rather than contradict one another.

Whether we take a mean of the two accounts, or allow 2 coſses for the bend in the Rahoon road, it will make only half a coſs difference: and if the latter rule be followed, 94 will be the number; and these produce 134¼ G. miles of direct distance; and allowing that the calculation was made from the suburbs of Lahore, 135½, or about 95 coſses, may be taken for the distance between Sirhind and the centre of Lahore. If then 95 be added to 105, the distance of Sirhind from Delhi, the sum total will be 200 coſses: and it appears that Thevenot reports this distance between Delhi and Lahore: some accounts reckon it so high as 205.

* All the coſses of the Ayin Acbaree are of the old standard; that is, the common, or Hindoostanny coſs, such as Acbar found in use when he ascended the throne. The new standard is indeed described in Vol. II. p. 212; but Abul Fazil appears to have registered the distances and dimensions of provinces, in the itinerary measure in common use: had he done otherwise, he would have been leſs intelligible.

A table of distances, which is supposed to have received the sanction of official approbation, at a former period, at Delhi; and which is calculated in royal or Shah Jehany cofses, is quite out, in the distance between Delhi and Lahore; for it allows only 105 cofses; whereas 150 would have been nearer the truth.

The latitude of Lahore is given by the Oriental tables, at 31° 50′. Col. Polier's map makes its bearing from Sirhind W 41° 45′ N, which would place Lahore in 32° 12′: but it must be observed, that the map is of too little authority in this part, to be implicitly followed. However, we may perceive what the idea of the author was; and it affords a presumptive proof that Lahore is *near* the parallel of 32°.* The tables in the Ayin Acbaree (Vol. III. p. 55) place Sealkote in lat. 33°; and by the construction it will be found at 53 minutes north of Lahore. Jhylum and Rotas are 33° 15′ in the same tables; and they appear to be from 66 to 69 minutes N of Lahore. These, indeed, point to a higher parallel than 32° for that of Lahore; but I prefer the proper parallel afsigned to it in the Ayin Acbaree, and in the tables of Ulug Beig and Nasereddin; that is, 31° 50′.

If then we lay off 135½ G. miles to that parallel, Lahore will stand in longitude 73° 50′; or 6° 26′ W of Canoge. The difference of longitude between the same places being 6° 30′, in the same tables, proves that Lahore occupies, in my construction, the place afsigned it by the Oriental geographers. It is also by the same tables, 24° 20′ east of Casbin, or Kaswin; and by M. Beauchamp's observation (in 1787), the difference is 24° 16′.

I have been thus particular on the subject of Lahore, because it forms a most capital point in this geography: for on it depend all the positions between Sirhind and Cabul. It is much to be regretted that we are not in poſsefsion of a good observation of lati-

* Mr. Forster, who travelled from Loldong to Jummoo, in 1783, gives a general idea of his course, which was too far northward to allow of Lahore being to the south of the position afsigned it. (See Vol. I. p. 226)

tude, taken there; as well as its exact distance from Sirhind, or Delhi; or both.

Lahore was the residence of the first Mahomedan conquerors of Hindoostan, before they established themselves in the central parts of the country. It owed its modern improvements, however, to Humaioon, the father of Acbar, who made it his residence during a part of his troublesome reign. Thevenot says, that including the suburbs, it was 8 leagues in length at that period; and, when he saw it, about the year 1665, the city itself was above a league in extent. Jehanguire, son of Acbar, allowed the Portuguese to build a church there; and some of its furniture remained at the time of Thevenot's visit.

The Rauvee (the ancient Hydraotes) on which it is situated, is a noble river; and by its navigable course, has a communication with the Indus and all its branches. The province, of which Lahore is the capital, is oftener named Panjab, than Lahore: however, Panjab being applied to a natural division of country, is applicable also, to part of Moultan. It is very extensive, and remarkably fertile; affording, in addition to all the necefsaries of life, wine, sugars, and cotton wool; the last of which supplied the manufactories of the province. There are also in the tract between the Indus and Jhylum (or Behut), salt mines, wonderfully productive; and affording fragments of rock salt, hard enough to be formed into vefsels, &c. Gold (according to the Ayin Acbaree) was found in the channels of its rivers; and the same is related of those of Kemaoon, which proceed from the same ridge of mountains. Ice is brought from the northern mountains, to Lahore, and sold there all the year. The famous avenue of shady trees, so much spoken of by the early Indian travellers, began at Lahore, and extended to Agra, near 500 English miles. Lahore is now the capital of the Seiks, a new power, whose name, even as a sect, was hardly known, until the rapid decline of the Mogul's empire, in the present century.

The next place, in point of consequence to the construction of this part of the map, is Attock, a city and fortrefs on the eastern bank of the Indus, and built by Acbar in the year 1581. We shall have occasion to speak on the subject of its historical importance hereafter. The position of this place is collected from various authorities. Unluckily its latitude is omitted in the Ayin Acbaree: and it can only be collected generally from that of the places lying on each side of it; and on the road paſsing through it from Lahore to Cabul: that is, Paishawur on the one, and Rotas, Jhylum, and Sealkote on the other. From these, as well as the distance of Attock from Jummoo, from Bheerah, and from Cashmere, respectively; it may be clearly inferred, that Attock is above the 33d degree, by several minutes. Paishawur is given at 33° 25′; Rotas and Jhylum at 33° 15′; and Sealkote at 33°; as we have said before: and Attock lies in the direct road from Paishawur to the other three places. Another proof is, that the shortest road from Lahore to Cabul, that is, the direct line between the two, is through Bungush, which lies to the south of Attock: and the paſs of Deenkote, over the Indus, to Bungush, lies above the parallel of 32° and a half, and is supposed to be 30 miles below, or to the S of Attock: of course Attock should be above the parallel of 33°. We shall enter more particularly into this subject, when we have discuſsed its longitude.

With respect to the longitude of Attock from Lahore, we receive very capital aſsistance from the invaluable communications of Capt. Kirkpatrick, who has collected from various Persian MSS. and histories, the registers of the actual measured distances, as taken by the orders of the Emperors Acbar, Shah Jehan, and others, on the great roads from the city of Lahore, Cabul, Ghizni, Candahar, and Moultan; and back to Lahore again: as well as those between Cashmere and the cities of Lahore and Attock, respectively; and between Cabul, Balk, and Bamian: besides many other portions of different roads, too tedious to mention.

These road measures, it is true, cannot be applied to geographical purposes with critical exactness; but as an approximation to the horizontal distance may be obtained by an allowance for the inflexions of the roads, founded on experience, and applied with the requisite attention to the nature of the country; which Capt. Kirkpatrick has enabled us to do; such materials must at least be superior to computed distances, resting on the vague report, or on the judgment of an individual.

But these measurements being set forth without any intimation concerning their direction, as it respects the points of the compafs, we have been neceſsitated to call in other aids; since the latitudes are seldom given; or if given at all, not with the requisite exactneſs. We shall now proceed to set forth those authorities on which the longitude of Attock rests, in respect of Lahore: in order to which, we must first establish the intermediate position of Rotas.

The principal, or most frequented road from Lahore to Attock, is by Rotas; and it makes a deep bend to the north, although the bearing between the two is nearer N W by W. The reason may be, to avoid as much as poſsible the rugged and hilly tract of Joud, through which the direct road by Bheerah leads. That the Rotas road takes the bend abovementioned, is proved by several circumstances: 1st. The latitudes of Rotas, Jhylum, and Sealkote. 2d. The proximity of Rotas to Bember, well known to lie north of Lahore, and in the direct road to Cashmere, which also lies north of Lahore. 3d. The great length of the road by Rotas, compared with that by Bheerah. 4th. The Persian map of the Panjab places Rotas about N 37° W from Lahore, and Jummoo N 10 E (as nearly as the angles can be measured on such kind of map); that is, the angle subtended by the two, is 47 degrees. Now we shall hereafter prove, by the distance between Sirhind, Biſsooly, and Jummoo, that this last place is really about N by E from Lahore; and its distance, in the map of Panjab, is 50 coſses. And as we collect from Sherefeddin, that Timur marched 33

coſes between Jummoo and the Behut river, the distance of Rotas from that river, added to the other, agrees to an angle of about 48 degrees; and may be deemed, at least, a strong presumptive proof, that Rotas bears about N W by N from Lahore. 5th. Sealkote, which lies 10 coſes from Jummoo, in the road to Lahore, is 4 marches distant from the river Jhylum, near the town of that name. These marches were made by the Emperor Baber, and are reported by Capt. Kirkpatrick: they may be taken at 44 G. miles direct distance, reckoning the mean march at 14 B. miles, by the road; or 11 G. miles, direct.

The distance of Rotas from Lahore, is very correctly given by Capt. Kirkpatrick, at 41 *royal* coſes (or those of Shah Jehan) of 4995 yards each, and allowing 1 in 9 for the winding in ordinary cases,* each coſs, in horizontal or direct distance, will be equal to 2,0214 G. miles; or 29,68 such coſes will be equal to a degree. Forty-one coſes then, are equal to nearly 83 G. miles, when the *general direction* of the road does not undergo a change: but here we have evidence that it changes at the croſsing-place of the Chunaub river, 23 coſses from Lahore; and the loſs of distance, by the angle, may reduce that of Rotas to 81½: and Rotas will then stand in lat. 32 58, instead of 33° 15′ of the tables: provided Lahore be in 31° 50′, as we have reason to believe.

The town of Gujerat lies on the Rotas road, between the Chunaub and Jhylum, at four or five miles from the former. Purchas (Vol. I. p. 434) says, that Bember is 16 coſses N or N E from Gujerat; and as Attock is reckoned 138 such coſses from Lahore, 16 would produce 19½ G. miles: and Bember being 33 Acbaree coſses,† on a bearing of N, a little W from Lahore, this appears consistent, and regulates the connexion of the two roads which lead to Attock and Cashmere respectively. It must be noted, that

* Or, in other words, the distance by the road is allowed to be one-eighth more than the direct distance.

† These are of 4757 yards each, and, with an allowance for the windings of the road, are taken at 1,925 G. miles each: or 31,16 are equal to a degree. [*Kirkp. MSS.*]

these roads are common for the first 10½ royal cofses; when the Bember road turns to the right, croſsing the Chenaub at a ferry, six miles farther from Lahore than that which leads to Rotas; by which we ascertain that the Chunaub has a S W course here; as indeed it appears to have all the way from Kishtewar, near its fountains, to the Indus.

From Rotas to Attock the measured distance is 43 royal cofses, or 87 G. miles, in direct distance. The bearing is a little to the west of north by circumstances; for Paishawur is 10 minutes to the N of Rotas, in the tables, and Attock lies to the E by S, or E S E, of Paishawur, about 34 G. miles. The relative positions of these places, which affect those of Hufsan Abdal and Cashmere, depend on the following *data:*

Mr. Forster croſsed the Indus at Bazaar, 10 cofses above, or to the north-eastward of Attock. From Bazaar to Paishawur, he estimated at 29 cofses, W by S: according to which, Attock should bear from Paishawur about E by S, distant 24 cofses (common). Capt. Kirkpatrick's report is 15½ royal cofses, or nearly 32 G. miles; and allowing the breadth of the Indus, and to the centre of each city, probably 34 may be reckoned; which will approach nearly to 24 cofses. But it would appear by the construction, that Paishawur should bear rather to the west, than W by S, from Bazaar; and then Attock will be E S E, instead of E by S, from the former.

In adjusting the latitudes of Attock and Paishawur, regard is to be had to the discordancy between the difference of latitude deduced from the tables, and that arising from the construction between Lahore, Rotas, Sealkote, &c. We have before observed (page 85), that Lahore being in 31° 50′, Rotas falls by construction in lat. 32° 58′, which is 17 minutes S of its latitude in the tables. Then, as we have no rule for correcting the latitude of Paishawur, which by the tables is only 10 minutes N of Rotas, whilst the construction allows 27, we can only call in aid a slight check, which the computed distance, by the direct road of Bheerah,

affords to the position of Attock. Bheerah is 60 common coſses from Lahore, in a westerly direction. It appears in the Panjab map, a little to the N of W; and at 100 parts in 235, of the distance from Rotas to Moultan. And as Moultan (as we shall hereafter make appear) is 126 common coſses from Bember, whose position is ascertained in respect of Rotas and Lahore, Bheerah must be placed at about 11 minutes N of the parallel of Lahore; and at 85½ G. miles distant from it; that being the produce of the 60 coſses.

From Bheerah the Emperor Baber made seven marches * to Nilab, near Attock (Kirkp. MSS.), and these I take at 77 G. miles; which intersect the line of distance from Rotas (87 G. miles) in lat. 33° 4′, and as Paishawur lies about W N W, distant 34 G. miles from Attock, its latitude should not be more than 33° 18′. In the tables it is 33° 25′; I have placed it in 33° 18′, lon. 70° 36′: and Attock in lat. 33° 6′, lon. 71° 15′: and this allows nearly a mean between the difference of latitude by the tables, and that by the construction.†

There is no kind of rule given for ascertaining the distance between Attock and Moultan: nor do the measured distances between Lahore and Cashmere, and Cashmere and Attock, serve at all to *prove* the position of the latter, more than *presumptively*; because the bearings are wanting.

Before I proceed to discuſs the remaining positions in the Panjab, it will be proper to establish the positions of Cabul, Candahar, &c. because that of Moultan depends on Candahar: and without Moultan, the arrangement of the Panjab would be incomplete.

From Paishawur to Cabul, the measured distance is 62 royal

* This route lay through Pirhala, which lies out of the direct line, it being only six marches from the Jhylum river, near the site of the town of the same name.

† The Ayin Acbaree, Vol. II. p. 131, allows 160 coſses for the length of the Panjab, *from the Setlege to the Sinde*: but no particular points on those rivers are specified. Attock is probably alluded to on the Sinde; Ludhana, or Machiawara, on the Setlege. My new map gives 165 between Attock and Ludhana; 188 to Machiawara.

cofses, or 125 G. miles direct distance, with the allowance for the ordinary degree of winding; but some mountainous tracts intervening, I allow only 123: and this distance laid off to 34° 30′, the latitude given for Cabul in the tables, places it in longitude 68° 34′. Mr. Forster reckoned 90 cofses, or about 129 G. miles: Otter reports six days journey, between Paishawur and Cabul.

It appears that the aggregate distance from Lahore to Cabul, by Attock, is given at 159 royal cofses; but the distance by the southern road, by Bheerah and Deenkote, is said to be much shorter. Capt. Kirkpatrick however, has not been able, as yet, to procure a statement of the distance, even in the grofs.

If we trace the line of measured distances from Cabul to Balk, in latitude 36° 21′, the 98 royal cofses give 198 G. miles; and these a difference of longitude of 3° 5′, which places Balk in longitude 65° 31′. In the table of Nasereddin and Ulug Beig, Balk stands 101° east of the *Fortunate Islands*, or 16° east of Casbin; which by M. Beauchamp's observation, is 49° 33′ E of Greenwich: and this result places Balk in 65° 33′; only 2 minutes different from that, deduced from the opposite quarter, by construction. And if we compare the tabular difference of longitude between Balk and Canoge, it will be found to be 14° 50′; whilst that by construction is 14° 45′.* The position of Balk, therefore, appears to be perfectly well adjusted, as far as can be judged by the quality of the materials before us; and corroborates that of Cabul.

But the longitude of Cabul being 104° 40′ in the same tables, does not agree with the construction; which allows 11° 42′ difference of lon. from Canoge; whilst that by the tables is only 11° 10′. This may be either an error in the copying of the tables, or in the original formation of them: probably the former, as

* By the tables of Ulug Beig and Nasereddin.

Canoge	115° 50	east of the Fortunate Islands.
Balk	101 00	
Difference	14 50	

By construction.

	80° 16	east of Greenwich.
	65 31	
Difference	14 45	

as Lahore is right; and then it might have been 104° 4′, instead of 104° 40′. Candahar affords no light to us on the occasion, as its numbers are totally out. It may be observed in general, that the longitudes in the tables of Nasereddin, &c. along the *southern* line, between the Caspian sea and Lahore, through Herat, are falsely written or calculated; whilst those in the *northern* line, through Nisabour, Meru, and Balk, agree with the intermediate distances.

Ghizni is reckoned 28 royal cofses from Candahar, or about 56½ G. miles. Mr. Forster reckons the distance 20½ farsangs; and says that a farsang is reckoned equal to 2 Hindoostanny, or common cofses: on this proportion the direct distance will be 58½ G. miles. The bearing he estimated at S ½ W: and the difference of latitude in the tables being 55 minutes, agrees with the first report; and both seem to prove that a farsang is leſs than two Hindoostanny cofses.* M. Petis de la Croix, in his life of Gengiz Cawn, says that Ghizni is 8 journies from Bamian; but as this last is placed on the authority of measured distances from Balk and Cabul, it agrees to 8 *marches* of an army, instead of *ordinary journies*, from Ghizni; and I conclude that M. Petis de la Croix, ought to have read *marches* in the Oriental author whom he consulted. Ghizni is accordingly placed in lat. 33° 35′, and 88 G. miles from Bamian; in which position it stands also about S by W from Cabul.

Candahar is given at 83 royal cofses from Ghizni (Kirkp. MSS.), or about 167½ G. miles. However, there is great reason to believe that this measured route, which was that of an army with artillery and carriages, was not the direct one: for Mr. Forster went by a different route, and reckoned the distance only 51½

* It appears by Mr. Forster's route from Candahar to the Caspian sea, that more than 23¼ farsangs were required to make a degree of a great circle; and as 42 Hindoostanny cofses are equal to a degree (see page 5), two such cofses will exceed a farsang, in the proportion of nearly one-seventh part. So loosely are the comparisons between the itinerary measures of different countries made! Thevenot says that a cofs is equal to *half a league!*

farsangs; or at most 103 common coſes, which produce 147 G. miles. The direct road from Cabul to Candahar, leaves Ghizni far to the south: and the distance, according to a MS. of Col. Popham's, is 122 coſes, stated to be short ones. If common ones, they will produce 176 G. miles; and will agree with the distance produced by the compound course and distance of Mr. Forster, through Ghizni; Candahar being, as is supposed, in, or near the parallel of 33°; according to the tables: and according to this authority, Candahar will be in lon. 65° 33′.

I return from this long but neceſsary digreſsion, to discuſs the position of the city of Moultan, which gave rise to it.

Moultan is placed according to the measured *road distance* from Candahar and Lahore; which is corroborated by its distance from Bember. Its latitude in the Oriental tables will by no means accord with the result of those distances; and the difference is a large portion of a degree: for the tables in question give 29° 40′, whilst the intersection of the distances points to about 30½°. Its distance from Attock is not given, which is unlucky, considering the great length and obliquity of the lines from Lahore and Candahar. But, for the following reasons, I conceive that Moultan cannot be lower than the parallel of 30½°.

1st. We learn from Capt. Kirkpatrick's MSS. that the distance of Moultan from Lahore, by the road which Dara Sheko marched to it, in his way to Candahar, is 77 royal coſes. But the tables of distances give only 70; and this number is frequently repeated; so that 70 is probably the distance by the directest road; 77 by the great road: and the mean of the two, 73½, may be the properest for our purpose; as the rule for calculating the horizontal distance, is founded on the supposition of a *moderate degree* of winding in the road. And we learn from the same authority, that the road marched by Dara Sheko, from Moultan to Candahar, was 160 royal coſes. Now 160 royal coſes produce 323,4 G. miles of direct distance; and 73½, 148½: and the intersection of these lines

of distance, place Moultan in latitude 30° 34′, lon. 71° 21′. The very great length of the line from Candahar, renders it unlikely that the horizontal distance is under-rated; and therefore the probability is, that Moultan is rather *above* than *below* the parallel of 30° 34′.

2d. We find by the Ayin Acbaree (Vol. II. p. 98, *et seq.*), that the Chowkundy district forms the frontier of the soubah of Moultan, on the north-east; where it is joined by the district of Shoor, in that of Lahore: as also, that the said district of Chowkundy occupies both shores of the river Rauvee; whose course is understood to be nearly S W by W, between Lahore and Moultan. And the same book, in describing the dimensions of the soubah of Lahore (page 131), says, that it is in breadth from Bember to Chowkundy, 86 cofses (that is, common cofses, as we have before observed); so that the common boundary of Lahore and Moultan, in the point that touches the river Rauvee, is 86 cofses from Bember; the situation of which is discufsed in page 85. We learn also from Bernoulli (Vol. I. p. 117), who took it from Persian MSS. translated by Anquetel du Perron, that Satgurrah is synonimous with Chowkundy; that it forms the N E frontier of Moultan; and is 40 cofses above the city of Moultan. If then we add these 40 cosses to the 86, we have 126 cofses, or 180 G. miles, for the distance of the city of Moultan from Bember, baſing pofsibly a trifle lost by the angle which the lines make at Chowkundy; and which cannot be estimated at more than 4 miles: therefore Moultan may be taken at 176 G. miles from Bember; and this distance reaches within three miles of the position of Moultan, resulting from the abovementioned distances from Candahar and Lahore. It may be remarked, that if the whole distance between Bember and Moultan, 176 G. miles, consisted of difference of latitude, it would not reach below the parallel of 30 degrees.

3d. The distance between Batnir and Toulumba, a paſs on the Rauvee, 35 cofses above Moultan, may be so well ascertained in

a general way, by the marches of Tamerlane, as to prove the great improbability of Moultan being to the south of 30 degrees and a half. Batnir is placed on the authority of Col. Polier's map, page 76.

Timur, or Tamerlane, made two marches (with his whole army) from Toulumba to the neighbourhood of the Beyah river; and part of a third, to the place where he crofsed it, near Jenjian. Allow 30 B. road miles for the two marches, and 4 more for part of the third march: total 34 B. miles, or 26 G. miles in direct distance. And Jenjian being 40 cofses from Moultan (Sherefeddin), Toulumba only 35, the course must have been between S E and S S E. Then he was 4 more days between Jenjian and Adjodin (or Puttan): 1st. Schoual; 2d. Asouan; 3d. Jehaul; and 4th. Adjodin. The three first marches being on the road from Moultan to Samanah, may be taken at E by S, or E S E; and the fourth towards Batnir, more to the S E. And for the distance allow 45 road miles for the three marches; and for the fourth, when Timur had separated from his grand army, and marched with horse only, 20: total 65 road miles, or 50 G. miles in direct distance from Jenjian to Adjodin; course E by S to E S E. Lastly, from Adjodin to Batnir, Sherefeddin gives 60 cofses, or about $85\frac{1}{2}$ G. miles.

Add then the several numbers 26, 50, and $85\frac{1}{2}$, together, and the sum total of the distance between Toulumba and Batnir, will be $161\frac{1}{2}$ G. miles. And Moultan being (by article 2d) 126 cofses from Bember; and Toulumba, according to Sherefeddin and others, 35 from Moultan, towards Bember; it is certain that if we lay off 91 cofses, the complement of 35, from Bember, to meet the line of distance from Batnir, we shall gain the position of Toulumba; which, by these authorities, falls in latitude 31°, and in the direct line between Lahore and Moultan, as determined by articles 1st and 2d. And this is really the position that Toulumba is understood to occupy: but had Moultan been more to the south,

and especially near the parallel set forth in the tables, Toulumba must have stood much nearer to Batnir; and would have been at variance with other positions, inferred from the MS. map of the Panjab, which it now agrees with.

4th. The distance of Moultan from Tatta, in the Persian tables of distances, 226 royal coſses, reaches nearly to latitude 31°: and

5th. I may add the opinion of M. Bernoulli (Vol. I. p. 116), that by the itineraries, Moultan cannot be much lower than that parallel.

Such being the authorities for the position of Moultan, *I* have placed it in latitude 30° 34′, longitude 71° 21′. Its longitude is much out, in the Oriental tables, and varies in different books.

Thevenot describes Moultan as a city of small extent for the capital of a viceroyalty, but strongly fortified, and having a Hindoo pagoda of great celebrity. The Ayin Acbaree represents it as one of the most ancient cities of Hindoostan. It has, or had, a great manufacture of cotton cloths; the province itself producing the cotton; as well as sugar, opium, galls, brimstone, &c. Thevenot describes the river that led to Moultan, as being partly choked up, or spoiled in its channel, in his time (about 1665), and this had greatly leſsened its trade. He also takes notice of a particular sect of Hindoos there, called *Catry*; and says, that this is their proper country. In another place, he explains the *Catry* tribe to mean *Rajpoots*, or warriors; that is, the *Kuttry* tribe, properly. We shall take notice hereafter, that these *Catries* were the *Catberi* of Diodorus, and the *Cathei* of Arrian; with whom Alexander warred, on the borders of the *Malli*: for it can hardly be doubted that Moultan is the modern capital of the country, which was designed by the historians of Alexander for that of the MALLI, although the ancient capital stood nearer to Toulumba. Moultan has been garrisoned by the King of Candahar's troops, since the year 1779; according to Col. Browne's information.

Having thus ascertained (with what degree of accuracy, the

reader must determine for himself) the three important points of LAHORE, ATTOCK, and MOULTAN, which are the foundations on which the scale, and relative parts of the whole Panjab country depend, I shall proceed to the detail of the geographical construction of the tract itself.

In describing the geography of a country which derives its very character and name from its rivers, it may be proper to convey a general idea of the courses of those rivers, before we attempt the particulars of its geography. Of the five rivers that give name to the Panjab, the Indus is not considered as one: it is rather the trunk, or stock, to which the Panjab rivers, and those of Cabul, are subordinate branches. This river, however, from its connexion with the subject of the Panjab, ought to be the first noticed. It is formed of about 10 principal streams, which descend from the mountains of Persia, Tartary, and Hindoostan, on the north-east, and north-west: and all these streams uniting near Moultan, form that celebrated river known to Europeans under the name of INDUS; and to Asiatics under that of SINDE, or SINDEH.* The Ayin Acbaree says, "the Sinde, according to some, rises be-"tween Cashmere and Cashgar, whilst others place its source in "KHATAI." (By Khatai, I believe Koten, the *Chatae* of Ptolemy, is meant, and not CHINA.) However, it is clear that the people of Hindoostan consider the north-eastern branch as the true Sinde.† The Emperor Baber, indeed, applies the name of Sinde to one of its western branches, that springs near Bamian: but he appears to differ from the rest of his countrymen in this particular; for the name of Nilab, which was applied to the river that ran by the site of Attock (long before that city was founded), was applied also to the same river, in its course through Little Thibet: and NILAB is synonimous with SINDE.

* The name Sinde was not unknown to the Romans: *Indus incolis Sindus appellatus.* Pliny, Book VI.

† The ancients reckoned otherwise: the same Pliny continues to say, *in jugo Caucasi montis, quod vocatur Paropamisus,* ADVERSUS SOLIS ORTUM EFFUSUS.

Before we proceed to detail the information relating to the upper part of the course of the Indus, it may not be improper to say a word on the subject of the name Nilab, which, in its application, has occasioned some confusion.

It appears from the commentaries of Baber, and other authorities quoted by Capt. Kirkpatrick, that early in the 16th century, a city named NILAB, stood on the east bank of the Indus, at a small distance below its conflux with the Cabul river. This city is called in the histories, *old* Nilab, which implies, that it was then an ancient city. [Ptolemy has a city of nearly the same name (Naulibe), on the opposite side of the Indus. *Asiæ Tab.* X.] The city of Attock, founded by Acbar, in a manner succeeded Nilab; their situations differing but little.

It may be conceived from the apparent etymology, that the city originally took its name from the river; which was more generally known by the name of Nilab, than Sinde (Nil-ab signifying the *blue river)*. ABDUL HUMEED LAHORI, and MAHOMED KAẒIM, both apply the name of Nilab to the Sinde, or Indus; the former, an author of great reputation both as an historian and a geographer, speaking of a march of the Emperor Shah Jehan, says, that "he came to the banks of the Sinde, *better known by "the name of Nilab, opposite to the fort of Attock*;" which applies directly to the point. The same idea is given by ABDUL KURRIM (a Cashmerian of distinction, whose memoirs have been translated by Mr. Gladwin). Speaking of Nadir Shah's crofsing the rivers above Attock (page 12), he says, "These five streams unite at "the ferry of Paishawur; which confluence is called the ATTOCK: "in ancient books it is called the *Nilab*." The ferry of Paishawur, doubtlefs means that of Attock itself, which leads acrofs to the province of Paishawur. It is however certain, that by a strange want of accuracy, the name Nilab came to be applied also to an adjunct river, that is, to a part at least of the river of Cabul; for

SOOJAN RAE says, that Jalalabad and Dakkah are situated on the Nilab.*

There can be little doubt after the testimony of Abdul Humeed, but that the name NILAB was one of the proper names of the Indus; and even that by which it was best known. And that it was named so in a remote part of its course (that is, in Little Thibet, from whence it flows), we have a proof from Abdul Humeed's History of Shah Jehan; in which the expedition of Zuffer Khan, into Little Thibet, in 1638, is recorded. In this account, the Nilab is repeatedly mentioned; and once, as a deep river.

The scene of Zuffer Khan's warfare being near *Shekerdou*, and *Shuker*, places situated from 12 to 14 caravan journies from Cashmere,† towards Cashgar (that is, in a N by W, or N N W direction), the furthest of these points on the Nilab, or Indus, must be at least 230 G. miles above Attock. It was a new fact to me, when Capt. Kirkpatrick's MSS. arrived, that the Indus came through the country of Little Thibet; but it appears to be perfectly well authenticated: and is, indeed, no more than a commencement of the same line of course, which it holds lower down. How remote its course may be from Shuker, must remain a *desideratum*. If far remote, it must be from the north, because the vast ridge of mountains which lies immediately on the east of Little Thibet, and the continuation of those of Hindo Kho on the north-west, confine the space in both those quarters: and as the heads of the Jihon, or Oxus, run from thence to the west, and the rivers

* Capt. Kirkpatrick, whose opinion ought to be of the greatest weight, from the closeness of his investigations, and his usual caution in deciding, thinks that the names of *Nilab* and *Attock*, as far as they respected the *adjunct river*, were confined merely to the part near the conflux; for instance, between Attock and Paishawur; and that the name of Attock succeeded Nilab, on occasion of the founding of the city of Attock. If the city situated at the conflux, gave name to one of the confluent rivers, it might as well to the other; since it was on occasion of their leading to such a city.

† This account is found in Bernier, Vol. II. Letter ix.—where Cashgar is said to be 44 caravan journies from Cashmere: and allowing for the extraordinary roughness of the country between Cashmere and Little Thibet, 11 G. miles may be taken for each day. Accordingly, Shuker will be 154 G. miles N by W, or thereabouts, from the capital of Cashmere.

of Koten, &c. to the east, the Indus can only come from the north.

It may be expected that I should explain the cause of so great a change in my opinions, respecting the head of the Indus, since the publication of the first edition of this work. The truth is, that after a long course of inquiry and investigation, I collected the following facts: That Cashgar, Koten, &c. by their known position in respect of Samarcand, must bear to the *west*, rather than to the *east* of north, from Cashmere: also that the ridge of mountains on the west of Cashgar, Koten, and Karia, can be no other than that which separates those countries from Little Thibet and Badakshan; and that joins on the south to Cashmere. This being the case, that vast space described by M. D'Anville between Badakshan and Koten, does not in fact exist; and the head of the Indus can only be on the west of the great ridge; because on the east of it, the rivers all run in a direction opposite to that of the Indus.

It is also very clear, that this great ridge, which has a course not far from meridional, and joins on the south to Cashmere, is really the IMAUS of the ancient geographers, which separated the two Scythias: for bordering on the west of Ptolemy's Imaus, and as nearly as posible in the true latitude, are the BYLTAE; and on the opposite side the CHAURANEI: and these answer precisely to BALTISTAN (the proper name of Little Thibet, *Lett. Edif.* Vol. XV. p. 188), and KAURIA, or KARIA, of the present times. In like manner, the SACÆ and SAKITA; CHATÆ and KOTEN; CASIA and CASHGAR, will be found to correspond; and all conspire to place the ridge of Imaus nearly in the meridian of Cashmere. But Ptolemy's longitude is so enormously extended, that his Imaus, the famous boundary of the two Scythias, is carried beyond the head of the Ganges, when it ought to be at that of the Indus. Mr. Pinkerton, with great judgment and discrimination, has described this boundary as it ought to be, in his Dissertation on the Origin

and Progreſs of the Scythians, &c. although he has not shewn on what grounds he formed his opinion, It is obvious that the extent of *Scythia intra Imaum*, must undergo a great reduction in consequence of this correction.

From the point at which we have fixed the course of the Nilab, or Sinde, in Little Thibet, to the place where it is noticed in the Ayin Acbaree, as paſsing through the borders of Sewad (or Sowhad), we know nothing concerning the particulars of its course. About a degree lower down, and at 20 miles above Attock, Mr. Forster croſsed it in 1783. It was then the 10th of July, and he remarks, that no rain had then fallen in that neighbourhood: but we know that the periodical rains must have commenced in the northern mountains near three months before, and of course must have swelled the river very considerably; for Mr. Forster judged the breadth of the stream to be three quarters of a mile. It was also very rapid, and turbulent, although not agitated by any wind. He observed also, that the water was extremely cold, and that a great deal of black sand was suspended in it.

The river of Cabul, after receiving those of Sewad, Bijore, &c. joins the Indus at Attock, and increases it very considerably; for though the Indus is sometimes fordable above Attock, we never hear of its having been forded below that point. From Attock downwards to Moultan, or to the conflux of the Panjab waters, this river has obtained the name of Attock; and below that point, Soor, or Shoor, until it divides itself into a number of branches near Tatta; where the principal branch takes the name of Mehran. The river, however, when spoken of generally, is called Sinde; although particular parts of it are known by different names.

The course of the Indus below Moultan, has its particulars from M. D'Anville; but the general direction of its course is considerably more to the west than he describes it. This is occasioned by my placing its *embouchure* so much farther west than usual, in

respect of Bombay, while the position of Moultan remains nearly as it formerly was. I observe, that most of the old maps of India give the Indus much the same course as I have done.

As I have a good deal to say on the subject of the lower part of the Indus, and particularly of its delta; which would break the thread of my present subject, I shall reserve it for a distinct head, and proceed with the geography of the Panjab, and its rivers.

The next river to the east of the Sinde, or Attock, and the westmost of *the five rivers*, is, in modern language, called Behut, or Jhylum (and often *Chelum)*; and its general course is nearly parallel to that of the Attock, but its bulk is less. This is the famous Hydaspes of Alexander, and said by the Ayin Acbaree to be anciently called *Bedusta*. According to Abdul Humeed, it is "larger "than the Tigris;" but I conclude he meant to speak of the lower part of its course. The Behut issues from the spring of *Wair* (or Wair Naig), in the S E part of Cashmere, and after a N W course through that valley, enters the mountains at Barehmoolah. During this short course, it receives abundance of rivulets and streams, forms some large lakes, and becomes navigable at a few miles below its remotest spring. After entering the mountains, it pursues the direction of the Panjab by a very crooked course, being pent up in a deep winding valley, whilst escaping from the wide base of the Cashmerian mountains; and rushing with such rapidity and violence, that even the stoutest elephant cannot preserve his footing in it. It emerges from the mountains, in the district of Puckholi, and is afterwards joined by two small but celebrated rivers, named Kishengonga, and Nainsook. After this, it traverses the territory of the Ghickers, still holding its course through a hilly country, until it crosses the upper or great road leading from Lahore to Attock, where the hilly tract is confined to the western bank. Here stood, not long since, a city of the name of Jhylum; which communicated its name to the river, during the remaining part of its course: and hence it is as commonly named Jhylum

as Behut. From Jhylum it pursues its course along the eastern border of the Joud mountains, and unites with the Chunaub at about 50 G. miles above Moultan; losing its name in that of the Chunaub, as heretofore it lost its name of *Hydaspes*, in that of *Acesines*, the ancient name of the Chunaub. The space between the Behut and the Indus, in the widest part, is about 94 G. miles. Pliny allows only 120 Roman miles between the Indus and Hydaspes.

The Behut, or Cashmere river, was supposed by M. D'Anville (though erroneously) to join the Sinde at Attock. Tavernier seems to have led M. D'Anville into this mistake; which has finally been the occasion of his misplacing, and of course mis-naming, all the other four rivers. The fact is, that the river which runs by Cabul, and, in the lower part of its course, bears the name of Attock, joins the Sinde on the west side, and in front of the city of Attock. We are obliged to Mr. George Forster, in the first instance, for clearing up this mistake: and finally, to the very particular and pointed observations of Capt. Kirkpatrick, for illustrating the courses of the rivers in general, in this quarter.

The second of the Panjab rivers is the Chunaub, or Jenaub; and is, as we have said before, the *Acesines* of Alexander. The Ayin Acbaree does not record its ancient name: Ptolemy names it *Sandabalis*. This river is larger than the Behut, and has its sources more remote; for it rises on the east of Kishtewar, and has two distinct heads, which unite below the line of Mr. Forster's route. Its general course is remarkably straight from N E to S W; and after leaving Jummoo, is through a flat country, gradually approaching the Behut. We have very tolerable authority for fixing the place of confluence: for Timur was only one day in marching from it to Toulumba, a point already fixed (page 92); and, by circumstances, the direction of his march was south-eastward, or S S E. The junction of these rivers is effected with great violence and noise, and no less danger to navigators: and this

circumstance is particularly noticed both by the historians of Alexander, and of Timur. The space between the Chunaub and Behut, is no where more than 30 G. miles, within the limits of the Panjab.

The third river is the Rauvee, or *Hydraotes* of Alexander;* on the south bank of which stands the city of Lahore. This is spoken of as a noble river, but appears to be somewhat inferior in bulk to the Chunaub. Its sources are in the mountains near Nagorkote, a famous place of Hindoo worship; and it enters the plains near Shahpour (called also Rajepour), from whence the famous canal of Shah Nehr was drawn to Lahore, 48½ common cofses in length. The intent of this canal seems to have been, to supply the city of Lahore in the dry season; when all the Indian rivers are from 20 to 30 feet below the level of their banks. Three other canals, for the purpose of watering the country on the S and E of Lahore, were drawn from the same place.

The space between the Rauvee and Chunaub, at their entry on the plains, is about 54 G. miles; and they gradually approach each other during a course of 170 miles.

The junction of the Rauvee with the Chunaub (or rather the Chunaub and Behut collectively), is effected nearly midway between Toulumba and Moultan; for the itinerary of a miſsionary (dated 1662)† mentions, that the party were four days in going by water from Toulumba to Moultan; and that on the second day they came to the mouth of the Chunaub. The Ayin Acbaree allows 27 cofses between the junction of the Behut and Chunaub, and that of the Rauvee with the Chunaub: but from circumstances, the distance must be applied to the *course* of the river, not

* Said by the Ayin Acbaree to be anciently named *Iyrawutty* (Mr. Gladwin's translation). Sir Charles Boughton Rouse translates it from his copy of the Ayin Acbaree, *Iravati*.

† This itinerary was obligingly communicated by the late Mr. George Perry, and appears to have been kept by a miſsionary who travelled from Delhi to Persia, by way of the Panjab and Sindy. It should be observed, that all the latitudes in it are too far south. The latitude of Agra is set down at 26° 45', though its true latitude is 27° 15'. And Moultan in 29° 32', and Tatta in 24° 20'; which places are commonly taken at 29° 52', and 24° 40'.

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to the road by land. When these three rivers are united, they form a stream equal to the Indus itself, at the place of confluence; which is from 20 to 30 miles below Moultan.

The fourth river is the Beyah, anciently called *Beypasha*, and is the *Hyphasis* or *Huphasis* of Alexander; being the next in succession to the *Hydraotes*, or modern Rauvee: and the fifth is the Setlege, Suttuluz, or Sutluj. This last river, about midway between its source and the Indus, receives the Beyah, and the collective stream takes the name of Kera; after which, they do not mix their waters with the other rivers of the Panjab, but join the Indus, in a separate stream, a great way to the south of Moultan; while the other three rivers pafs in a collective stream on the north of Moultan, and close under it. Ptolemy names the last river of the Panjab (going eastward), the Zaradrus; Pliny, the Hesudrus. Arrian has the name of Saranges among his Panjab rivers; and says that it joins the Hyphasis (or Beyah). The Ayin Acbaree says that its ancient name was *Sbetooder*; from whence we may easily trace Setlege, or Suttuluz. Before it is joined by the Beyah, it is a very considerable river, and is navigable more than 100 miles. About 24 miles below the conflux, a separation again takes place,* and four different streams are formed; the northmost, and most considerable of which, recovers the name of Beyah; and is a deep and rapid river. The others are named Herari, Dond, and Noorney: and near Moultan they unite again, and bear the name of Setlege, until both the substance and name are lost in the Indus, about 80 miles, or three days sailing,† by the course of the river, below the mouth of the Chunaub. It is owing to the separation that takes place, after the first confluence of the Beyah and Setlege, I apprehend, that so many names are given to the latter, by modern as well as ancient authors: which names, applied by the natives to their respective branches, have, by Europeans, or

* Ayin Acbaree. † Miſsionary's itinerary.

others, who were ignorant of the circumstances, been supposed to belong to one principal river only. The Persian map of the Panjab, and Sherefeddin's History of Timur, take notice of only one branch, besides the Beyah (whence one would conclude there were only two principal ones), and this second river is named Dena: pofsibly the same meant in the Ayin Acbaree, by the Dond.

The sources of the Setlege and Beyah, are, like those of the other rivers of the Panjab, situated in the great chain of snowy mountains, that extend from Sirinagur to the north of Cashmere; and which are in fact the true IMAUS; or, at least, the mountains to which that name was first applied by the ancient geographers. The Ayin Acbaree tells us, that the Setlege rises in the mountains of Gahlore, or Cahlour; a district which has Bullauspour for its capital: and the Beyah in the mountains of Keeloo, the position of which I am ignorant of.

In tracing the general courses of these rivers, I have derived considerable afsistance from the Persian MS. map of the Panjab (so often quoted): it was drawn by a native, and preserved in the archives of government in Hindoostan. The names were obligingly translated from the Persian, by the late Major Davy, at the request of the late Sir Robert Barker. The tract, of which this map serves as a ground-work, includes the whole soubah of Lahore, and a great part of Moultan proper. The points of Lahore, Attock, and Sirhind (the fixing of which, I have before given an account of) determine the scale of the map; the intermediate distances from place to place in it, being given in writing, and not by a scale.

I consider this MS. as a valuable acquisition; for it not only conveys a distinct general idea of the courses and names of the five rivers; but, with the aid of Capt. Kirkpatrick's MSS. and the notices in the Ayin Acbaree, sets us right as to the identity of the rivers crofsed by Alexander, during his famous expedition into India; of which more will be said hereafter.

The town of Adjodin, often mentioned by Ferishta, and Sherefeddin, is recognized in the MS. map, by the circumstance of its containing the tomb of Sheik Furrid, which was visited by Timur. In the map it is called *Paukputton*; but it perfectly answers to the position of Adjodin, as described by the above authors; and is a point, on the fixing of which a great many others depend. Its identity is also confirmed by Capt. Kirkpatrick.

The materials which I have made use of, in forming the detail of the Panjab, are so many, and so various, that it would require too much of the reader's time and patience, to attend to the diſcuſsion of all the points that are established by them. And as I have ventured to dilate on the important positions, on which the scale and dimensions of the tract rested; the leſs important ones must neceſsarily be dispensed with. Certain points, however, on which the eastern boundary of the tract depends, it will be necessary to touch upon: with which, and some new matter relating to the country of Joud, &c. I shall close my account of the geography of the Panjab.

The eastern boundary of the Panjab, is properly the ridge of snowy mountains (the true IMAUS) from whence its rivers spring: but in a more limited sense, and particularly according to the ideas of the present times, the Panjab means the country situated *without*, or to the west of the hilly tract; and which is of considerable width, being poſsibly from 50 to 60 miles from the edge of the plains, to the summits of the highest mountains. And the idea of the Panjab was, I believe, never extended northward, beyond the hills of Bember, and the borders of the Ghickers.

Mr. Forster, who travelled through the hilly tract abovementioned, has not only contributed some materials towards the elucidation of its geography, but has thrown much light on the loose materials contained in Bernoulli's first volume, and on several particulars in the MS. map of the Panjab, and in that communicated by Col. Polier. The width of the space between the great road

to Lahore, and the first line of hills, together with some positions situated within them, is collected from the following authorities.

Kullanore, on the Rauvee, is 35* cofses above Lahore, in the Panjab map; 59 from Rahoon, in Bernoulli. Rahoon itself is 74 from Lahore, 22 from Sirhind, 9 or 10 from Fulwar Gaut. Kullanore will then stand about E 30° N from Lahore, distant 35 common cofses. It determines also the general course of the Rauvee, above Lahore; which will be found to be nearly the same as from Lahore to Toulumba; the whole country being level, from Kullanore, downwards.

By the help of this general course of the Rauvee, we collect a position in Mr. Forster's route, in this quarter. He crofsed the Rauvee at Bifsooly, a principal fort, lying at, or near, the entrance of the hills, 42 cofses S E from Jummoo. Bifsooly does not appear in the Panjab map; but Adeenagur, a place 40 cofses from Lahore in that map, 42 in Polier's, does. Behaungur, called also Bungurry, a point in Forster's route, 4 cofses S E of Bifsooly, appears also in the Panjab map, at about the same distance to the N E of Adeenagur. Hence we have the general position of Bissooly; which we place on the N bank of the Rauvee, 6 or 7 cofses above Kullanore, or 41½ above Lahore; or, in other words, about 59 G. miles E 30° N from Lahore. And the distance is farther confirmed by the MSS. of Capt. Kirkpatrick, and by Bernoulli: for, according to the latter, Shahpour is 7 cofses above Bifsooly, and on the Rauvee: and from the former we learn, that Shahpour is synonymous with Rajepour, from whence the *Shah Nebr* canal was brought; and which is known to be 48½ cofses from Lahore.

Here then we have an important geographical point settled with respect to Lahore, and Sirhind: and by which, on the one hand, we fix Jummoo, which is 42 cofses from Bifsooly, by Forster's

* This, and other numbers, are *written* on the map.

account (40 by Bernoulli's); and 50 from Lahore, in the map of the Panjab. Jummoo stands then about N by E from Lahore; and Sealkote is 10 cofses from it, towards Lahore: and as Sherefeddin reckons 88 cofses between Jummoo and the Behut river; and Kirkpatrick, 4 marches between Sealkote and Jhylum; the position of Jummoo will be found of the greatest use in fixing the angle of the road between Lahore and Attock.

Noorpour is the next point, situated 12 cofses S E from Bifsooly, by Forster's account; 10 from Shahpour, in Bernoulli. This town is the capital of a district of the same name.

Another principal point is Ray Gaut, or Raypour, a remarkable pafs on the Beyah river. This place in Col. Polier's map, stands 24 cofses north-eastward of Sultanpour; 25½ from Jallindhar.* And by Forster, it is 19 cofses from Noorpour: but as 2 of these cofses were at a great angle with the rest, 17 or 18 may be taken.

Ray Gaut is situated a considerable way within the level country of the Panjab: for Mr. Forster's party, for security, left the great road of Cashmere, which leads from Bullauspour, through Nadone, and Hureepour, to Noopour; and struck to the left, or S W, from the neighbourhood of Nadone; thereby tracing the south bank of the Beyah, from that place to Ray Gaut. To regulate the direction of this line; and of course to fix Nadone, and Hureepour, and eventually Bullauspour, and Nagorkote; we have the following *data:*

Bejwara, called also Hoshearpour, is 3 journies (perhaps 36 cofses) from Sirhind (Bernoulli); and 16 cofses N E of Jallindhar (Polier); so that it may be about 25 G. miles N of Rahoon. Rájapour is 10 cofses N, or N by E, from Bejwara; 30 from Roopour, towards Jellamooky, the temple built over the subterranean fire near Nagorkote. Hureepour is 11 cofses beyond Rajapour, on the same road; Jellamooky 6 or 7 farther. All these

* Jallindhar is a known position, 48 G. miles from Sirhind, and 13 to the right of Nakooder, on the Lahore road.

particulars are from Bernoulli: and we collect from them, that Hureepour is 21 cofses; or, about 30 G. miles from Bejwara; 84 from Sirhind. And by means of *Seba*, a fort in Mr. Forster's route, and noticed also in Bernoulli, we find that Hureepour must stand 23 or 24 cofses from Ray Gaut; which, with the distance from Sirhind, will fix its position. For Seba is 18 cofses east, northwardly, from Ray Gaut; and 7 south-west, or S S W from Hureepour. Bompal, in Forster, is 15 cofses to the eastward of Seba: and Nadone, a town on the Beyah, about 3 miles to the N W of Bompal.

Seba appears to be the Siba of the old maps, in which it appears as the capital of a district; and may have been succeeded in that capacity, by Nadone.

Kote Kangrah, the fortrefs belonging to the famous temple of Nagorkote, is given at 49 royal cofses, equal to 99 G. miles, from Sirhind (northward). Purchas, Vol. I. p. 438, says, that it is 80 (common) cofses from Lahore, which is probable.* Bernoulli says, it is 50 cofses from Jummoo; which can only be true, if meant for royal cofses. Bernoulli reckons Jellamooky 6 or 7 cofses from Hureepour: and Kangrah 7 from Jellamooky; which is probable. And it would appear that Jellamooky should lie N E from Hureepour; S S W from Kangrah.

Mr. Forster estimated the course N W, from Bullauspour to the camp of the Kangrah troops; and the distance 26 cofses: and from thence 10 more cofses, very circuitous, and perhaps only 6 in direct distance, westward, to Bompal; which we have stated to be 3 miles S E of Nadone. This is, however, but poor authority for placing Bullauspour; and Bernoulli only says, that it is about 3 journies from Roopour (a well known point, on the Setlege) through Nalagur; and this latter is 12 cofses of the way, from Roopour. This would place it 51 G. miles, of direct distance,

* The Persian MS. map of the Panjab, place Kangrah about N N W $\frac{1}{4}$ W from Nadone; and Jellamooky midway between them.

from Roopour; 67½ from Sirhind: but the country being exceedingly mountainous, the direct distance is probably much leſs. Forſter's distance from Bompal might give 46 G. miles of direct distance, in a country leſs rugged; but here, perhaps, only 40 or 41. The Panjab map allows 2 parts in 5, of the distance between Nadone and Jummoo, for that between Nadone and Bullauspour; which produces 44 miles: and it is probable that the 3 journies from Roopour may only produce as much; and then Bullauspour will ſtand about N 26° E, 60 G. miles from Sirhind. And in order to this, we muſt ſuppoſe the Setlege to take a S W courſe within the hills (as all the maps indeed represent); and it is highly probable that it ſhould run off at right angles with the direction of the mountains, which riſe above one another, ridge behind ridge.

We have no materials with which we can fill up the lower parts of the Panjab, in the intervals between the rivers. From the Setlege to the Jhylum, and to the hills that bound the Panjab, on the N and E, it appears to be chiefly a tract of flat and very fertile land: indeed, the courſes of the four eaſtern rivers very plainly indicate a regularity of ſurface, and ſameneſs of ſoil. But between the Jhylum, or Behut, and the Indus, there is a large proportion of hilly country, which may be ſuppoſed to influence the courſe of the Jhylum, and give it ſo different a form from the others; the river conforming to the border of the hilly tract.

The geography of this hilly tract, of which Capt. Kirkpatrick has tranſmitted a particular account, I had misconceived, when I publiſhed my former work: for the Joud mountains, or rather hills, which compoſe a principal part of it, I had ſuppoſed to lie to the *north* of the upper road to Attock; whereas they evidently lie to the *ſouth* of it. And this occaſioned me to miſtake the paſs over the Indus, by which Tamerlane entered and returned from Hindoostan; as I ſhall make appear to the reader, when I take up the ſubject of that conqueror's progreſs.

Capt. Kirkpatrick quotes the commentaries of the emperor Ba-

ber, to prove that the Joud hills are those which extend from a point on the Behut, 7 cofses N of Bheerah (which we have placed at 60 cofses W, a little north from Lahore, page 87), to the territory of the Ghickers, a little N of Rotas; that is, near 70 G. miles along the west side of the Behut; for Baber, who crofsed the Behut, a little above Jhylum, is said to have paſsed beyond (or to the N E of) the Joud hills, in his way from Pirhala to Sealkote. Baber also distinguishes a second ridge of hills, 7 cofses west of the Joud ridge, which were occupied by the Jajoohah tribe (descended from the same stock as the Joudis): and this ridge, he observes, joins, or approximates on the one side, to the Cashmere hills; and on the other extends to Wesunkote, on the Indus. Both these ridges are marked on a Persian route in the Panjab, as extending from the Behut to Diga Serai; and both are also designed in the Panjab map. The Jajoohahs extended westward to the river Sohaun,* in Baber's time; and this emperor observes, that although the hills that lie between Bheerah and the city of Nilab, were occupied by various tribes; yet, "that mountainous "tract had obtained the general name of Joud." He remarks also, that the continuation of the hilly tract in question, which joined to Cashmere, was held by the Ghickers: and as Pirhala, 3 marches N, or N W of Bheerah, was the residence of one of their princes, it is certain that the Ghicker territory must have extended from Cashmere to the second ridge of hills mentioned by Baber; which would carry this territory, in some places at least, considerably to the south of the upper road to Attock.

It may be expected that the boundaries of the Joud and Ghicker territories fluctuated very considerably, not only during the invasions of Hindoostan, from the north (which these tribes often favoured; they being by nature and by situation, particularly the Joudis, capable either of favouring, or of obstructing such inva-

* This is one of the smaller rivers of the Panjab, and takes its course between the Behut and Sinde. It will be found in the map, together with several others, which were deemed too unimportant to merit a description in the memoir.

sions), but even at ordinary times; and therefore it would be vain to attempt drawing a line of boundary between them. It is, however, clear, that the Ghickers inhabited the northern and largest division of the hilly tract, situated between the Behut, the Sinde, and Cashmere; and the Joudis the southern and least division: and we find also, that the latter division terminated at a few cofses N of Bheerah.

What the nature of the country may be on the S and S W of Bheerah, we are not told. The Panjab map marks no hills on the S of Kooshab, which is 10 or 12 cofses below Bheerah: but by the description of the conflux of the Behut and Chunaub, which is a great way to the S of Kooshab, the soil in that part is rocky: which implies that the new-made land does not extend far into the tract between the Behut and Sinde.

We may remark, that the inhabitants of this hilly tract (meaning both Joudis and Ghickers, or their predeceſsors), have generally sided with the invaders of Hindoostan at large; considering their own rugged and sterile country only a paſsage to the other. They invited Alexander, and they appear to have invited Humaioon: and they rather favoured the progreſs of Tamerlane, and others. Probably, from the nature of their country, they have ever maintained a sort of independency of the Hindoostan emperors, excepting in the most vigorous periods of their government. How they stand with respect to the Seiks, and Abdalli, at present, I know not: but in Col. Browne's List of Residencies of the chiefs of the Seiks, I perceive only a single one, that is Rotas, in this tract.

By the help of the Persian and other MS. maps, particularly a map of the Panjab,* obligingly communicated by Colonel John Murray, Commiſsary General to the army in Bengal, I have been enabled to give the road from Vizierabad to Yehungsaul (or Je-

* The map in question, was drawn by Lieut. Rind, of the Bengal establishment; as well as that of the roads in the Dooab, mentioned in page 66.

hung-salan), through the Retchna Doabah, with many other positions in and about the Panjab. The road from Jummoo to Berouja, &c. is from Sherefeddin's Timur. Debalpour is known to be on the great road from Delhi to Moultan: and the divisions of the country in the Ayin Acbaree, point out its situation to be far down the Setlege, in the Jallindhar Doabah.

Although we have the dimensions of the Panjab country, in a tolerably satisfactory manner, from N W to S E, both in the aggregate, and in particulars; yet we have not the means of determining its breadth from north to south; or rather, from Lahore to the Setlege. The first junction of the Beyah and Setlege, is stated, by the Persian map, at 63 cofses below Ludhana; but we are left to gueſs the croſs distance from Lahore, unleſs what is said in the same map be true, that it is only 18 cofses from Lahore to Kuſsoor, and also that Kuſsoor is on the banks of the Setlege: but this is highly improbable from other circumstances; in particular, that the same Persian map allows a greater space between the Rauvee and Setlege, than between the Rauvee and Chunaub; and that Firosepour, at the conflux of the Beyah and Setlege, is reported by Capt. Kirkpatrick, to be 80 cofses from Lahore. Col. Murray's map places Kuſsoor on the Beyah, and not within 25 cofses of the Setlege. The marches of Timur acroſs the lower parts of the Panjab, afford but a faint light to guide us, such as days' marches; and those in an oblique direction.

THE geography of the Panjab country, as being, comparatively, of little consideration in a map of such extent, has been detailed much beyond its seeming importance. The reason is, that we are not likely, as far as I can judge, for a great length of time, to be poſseſsed of any better materials than those I have exhibited; indifferent as they may be, in many instances: and therefore I con-

sider it as the finishing stroke to the whole matter, for some time to come. And if any good materials do cast up, such as the latitudes and longitudes of some principal points, or some measured routes; I shall, I flatter myself, have prepared the ground for the erection of a fabric of a better construction. The Panjab country being the frontier province towards Tartary, and the northern parts of Persia, from whence have sprung the conquerors of Hindoostan in every age, Alexander alone excepted; it follows, that their route to the interior parts of the country, must have led through it. Of all these conquerors, as far as I can learn, the routes of Alexander, Timur (or Tamerlane), and Nadir Shah, are the only ones that have their particulars on record.* Timur's route I have already in part given, as it was interwoven so closely with the geographical construction, and towards which it furnished a considerable proportion of materials; and the remainder will be given. Nadir Shah's route was the ordinary one, by Attock and Lahore; and he returned, as appears by Abdul Kurrim, and M. Otter, by nearly the same route; save that instead of crofsing the Indus at Attock, he went higher up, and pafsed the borders of Sewad, in his way to Jelalabad and Cabul. Unfortunately for geography, no detail of this part of Nadir Shah's route has yet appeared: for was it particularized, it might throw much light on the geography of Sewad, and Bijore; and might also explain some circumstances respecting the courses of the rivers in that quarter, which now remain in uncertainty.

The particulars of the marches of the late Acmet Abdalla (King of Candahar), during his frequent visits to Delhi, in the present age, have not come to my knowledge. Alexander's route then is the only one that remains to be mentioned; and although last

* Turmeshirin Cawn, a descendant of Gengis, or Zingis Cawn, made an irruption into Hindoostan about the year 1240; but the particulars of his route are wanting. Sherefeddin mentions, in one place, that he crofsed the Chunaub at Toulumba; and in another, that he besieged the city of Meerat in the Dooab. But Ferishta confines the exploits of this descendant of Gengis, to the Panjab country.

in point of order, here, is to be considered as the first, as it respects history, and the gratification of popular curiosity: and therefore, of course, merits a particular and pointed discuſsion.

I shall now proceed to trace the route of Timur, or Tamerlane, chiefly from his history, written by Sherefeddin; and illustrated by the observations of Capt. Kirkpatrick.

In order to fix the situation of the paſs over the river Indus, by which this conqueror entered Hindoostan, and returned from it (for it is evident by the history, that he came and returned by the same paſs), it will be neceſsary for me to anticipate the description of the roads leading from Cabul, and other places in that quarter, to Hindoostan; a subject which properly belongs to the description of the countries on the west of the Indus; but which can never be introduced with more effect, or to the reader's advantage, than in this place; where it will serve to illustrate at once, the account of the progreſs of Timur, and of Alexander.

The country of Cabul, in respect of its natural geography, is divided into two parts, separated by a ridge of very high mountains, usually covered with snow, which runs from west to east, from the neighbourhood of Ghizni, to that of Deenkote on the Indus, below Attock. The tract lying to the north of this ridge, is named Lumghan (or the Lumghanat); and that on the south Bungush (or the Bungushat): each having one or more considerable rivers intersecting their whole length, and disemboguing themselves into the Indus. That of the Lumghanat, is the river of Cabul, called also the Kameh, and in its lower part the Attock; and that of the Bungushat is the river that paſses by Nughz, and Bunnoo, and whose proper name I am as yet uninformed of. Each tract has also its proper roads, and its paſses over the Indus, from the districts of Cabul, Candahar, and Ghizni, respectively: but the northern, or Lumghanat road, is the one in common use, whether to Persia, or Samarcand; notwithstanding its circuitous nature, as it respects the former of these countries: for it is both the easiest and the safest.

Not to enter too much into detail, I shall only mention the principal of these communications.

1st. The upper, or Lumghanat road, between Cabul and Lahore, paſses through Paishawur, and croſses the Indus at Attock. This, which is named the KING'S ROAD, is the most practicable for armies, and the safest for caravans and travellers; and is accordingly, as we have said before, the most in use.

2d. Kherpeh, which appears to be only a branch of the former, separating from it at Jelalabad. It is not sufficiently particularized, to enable us to understand its entire course.

3d. The *upper* Bungushat road, which croſses the Indus either at Deenkote, or Reishi: and leading to Cabul by Bunnoo and Nughz: and to Lahore by Bheerah. The positions of Deenkote, and Reishi, I am not enabled to fix with precision; but am led to suppose that Deenkote is from 30 to 35 G. miles below Attock; and Reishi, a very few miles above Deenkote. The great ridge of mountains just mentioned, lies immediately between these paſses and Attock; and shuts up the communication between the Bungush and Lumghan roads, as far as respects the commodious, or safe paſsage of an army; for the heights of SINDIA BUSTEH, which are described as steep, craggy, and tremendous, are to be croſsed between Deenkote and Paishawur, by those who would go from the former, to Cabul. A better way is by following the course of the Bungush road, through Kohaut, Bunnoo, Nughz, and Irjab; and this way Timur came. Kohaut I find in Bernoulli (Vol. I. p. 70) at 12 coſses from Paishawur; and it is also four marches from Reishi (Kirkp. MSS.).

How far the snowy ridge extends westwards, I know not; probably it sinks in its progreſs that way; as, although mention is made of it in Timur's march from Cabul to Nughz, yet it is not represented as forming an obstacle to the progreſs of his army. Its position in that quarter, is marked by the march of Timur, and by the circumstance of Irjab being in the Lumghan division; Shenuzan, in that of Bungush. What direction the ridge afterwards

takes, we know not; but it does not crofs the line of the road between Ghizni and Candahar. Probably it paſses on the south of Candahar, and forms the height named Suhmandroog; which occurs in the march of Dara Sheko, at 45 G. miles to the S E of Candahar: in which case, it answers to the chain of mountains described by Ptolemy under the name of *Parveti*; and as the southern boundary of the province of *Paro-pamisus (Asiæ, Tab.* IX.).

The 4th, is the *lower* Bungush road, which crofses the Indus at Chowpareh paſs, 25 to 30 G. miles below Deenkote; or perhaps 60 below Attock. This route also leads to Lahore through Bheerah; to Ghizni and Cabul, by Fermul (which lies S E from Ghizni, S from Cabul); and to Candahar, by the DESERT. When we consider the existence of the desert in question, and the mountains, wilds, and dreadful torrents, that occur in the Bungush roads, we are no longer at a loſs to know why the road by Attock and Cabul, to Candahar, and Persia, in general; though circuitous, obtains the preference. It was in use even in Tavernier's time, when the Mogul government was in its vigour. To the above obstacles, we may add, *that* arising from the presence of certain fierce Afghan tribes, which occupy the country in the line between the Panjab and Candahar: and which have never continued long enough under a course of subjection and civilization, at any one time, to enable them to retain any traces of the latter, after the subjugation had ceased.

These are all the great communications, which apply to our present purpose of describing the route of Timur from Cabul towards Hindoostan. According to Sherefeddin, he went by way of Irjab, Shenuzan, Nughz, Banou (or Bunnoo), and thence to the Indus, at the very place where Gelaleddin, King of Karasm, fought with Gengis Cawn; and so heroically swam the river, after his defeat, in 1221.

This account of his progreſs admitting of no doubt, as to the general facts; and the description, bearing, and tendency, of the

paſses over the Indus, and the nature of the countries they lead through, coming from the pen of the Emperor Baber; whose local knowledge in those parts was very considerable, as being obtained by long experience, at the head of armies: and as the snowy ridge of mountains lay between Timur's route to Bunnoo, and Attock; and being unnoticed by the historian, was certainly never croſsed by Timur (nor could any ordinary reason have induced him to take so circuitous a route, through exceeding difficult roads): I say, taking all these circumstances into consideration, we can have no doubt that Timur croſsed the Indus on the south of this ridge. That Gelaleddin croſsed it there, is clearly inferred from the course of his march from Bamian to Ghizni, and thence to Gurdaiz;* all of which places, point towards the Bungush road, and not to that by Attock: and it is unquestionable that Gelaleddin and Timur croſsed the Indus at one and the same paſs, for Sherefeddin positively says so; and this paſs can be no other than Deenkote, or Reishi.

The arrival of Timur in the district of Joud,† when he had croſsed the Indus, is, according to Baber's account of the geography of Joud, an additional proof that the paſs lay far below Attock.

And now that the geography of the Panjab is so far improved by Capt. Kirkpatrick's communications, we may with certainty conclude, that Timur returned from Hindoostan by a route below Attock. We trace him from Delhi to Jummoo; from whence, after 33 coſses of road, he came to the river Behut, or Jhylum, near Jubhan, or Gebban; and pursuing the course of the river 20 coſses, he came to Sambaste, *situated within the mountains of Joud.*‡ This is a clear indication of his having turned to the south, from Jummoo: for had he gone 20 coſses *upwards* on the Behut, after

* Capt. Kirkpatrick informs us that Gurdaiz (probably the Kerdiz of Sherefeddin) was a point in Gelaleddin's retreat from Ghizni: also that the name of the rock in the Indus, nearly opposite to Attock, has no reference to Gelali, or Gelaleddin.

† Sherefeddin. ‡ Ibid.

falling in with it, at a point 89 coſses from Jummoo, he would have been advanced into the northern part of the GHICKER territory, instead of being in that of JOUD. The circumstance of his croſsing the desert of Gelali, both in coming, and in returning; (that desert commencing near the place where Gelali, or Gelaleddin, croſsed the Indus), is also in proof of my supposition. The positions of Jubhan, Sambaste, and Berouja, cannot be recognized in the present geography; but that of Berouja must fall very near to Pirhala, if it be not meant for the same place.

Timur's first object after croſsing the Indus,* being to effect a junction with the army of his grandson Peer Mahmud, which was then besieging Moultan, he directed his course that way, instead of taking the common road to Delhi, by Rotas and Lahore. The neighbourhood of a navigable river being a desirable object to an army which was marching through a dry sterile country, he pushed for the nearest part of the Behut, or Jhylum river, where he attacked and took the fortreſs and island of Sheabadin Mobarick.

Sherefeddin allows only two marches between the Indus and the Jamad, or Behut;† but it cannot be leſs than 6 marches from the Indus to the Behut, and therefore there must be an error in the statement of the time. Between the time of paſsing the Indus, and the arrival at the conflux of the Behut and Chunaub, 12 days elapsed; that is, from the 12th, to the 24th of Moharrem; and as it may be about 10 marches from Deenkote to the conflux, by Timur's route, here is an interval of 2 days more than the march required; which might have been employed in the reduction of Sheabadin's fortreſs, &c. Perhaps the date of Timur's arrival at the fortreſs, was the 18th, instead of the 14th of Moharrem.

A fortreſs, not named, stood on the west side of the conflux of the

* October 11, 1398. The chronology of this event is differently stated: I have followed M. de la Croix's translation.

† Sherefeddin, in his description of Cashmere (Vol. II. chap. xxxi. of his History of Timur), applies the names of Jamad and Dindana, to the Behut.

Behut and Chunaub rivers; and just below it, Timur threw a bridge of boats over the confluent waters. This junction, we have observed elsewhere, is accomplished with great violence and noise; and Sherefeddin says, that the waves dashing against one another, make it appear like a troubled ocean: for such large rivers, pent up within strait rocky beds, form a rapid and troubled stream at their meeting. A like description of it is given by the historians of Alexander; which, together with the concomitant circumstances of general position and connexion, render this conflux a most unequivocal point of reference, in the comparison between the ancient and modern geography.

Timur made only one march between the conflux and Toulumba: and as he did not bring the army with him, but left it croſsing the river, it may be inferred that the march was not a short one; and therefore I allow 20 road miles for it, in a S E by S direction; that being the position of Toulumba from the conflux, by the above construction. According to Sherefeddin's manner of writing, one could hardly be certain whether Toulumba was on the side of the Rauvee, or the Chunaub. Ferishta has placed it on the latter, erroneously; for the miſsionary above quoted, came down the Rauvee, and paſsed by it; moreover, giving its latitude at 15′ north of Moultan, though it is probably 25′. This is a considerable town, and a paſs of consequence, on the Rauvee; and often occurs in Ferishta's History of Hindoostan. It was in the neighbourhood of this place, that Alexander made war on the Malli, or people of ancient Moultan; as will be taken notice of in its place. Timur staid here 6 days, and then proceeded with the whole army acroſs the Baree Doabah, to Shawnawez (or Shanavas), a large and populous town near the north bank of the Beyah, after its *separation* from the Setlege. Here he found more grain than his army could consume; whence we may infer the fertility of the country, which is low and flat, and subject to periodical inundations, like Bengal. Sherefeddin describes at this

place, a deep lake, fortified round with a wall, and defended by 2000 men; which reminds one strongly of something similar at *Sangala*, which Alexander attacked, before he reached the Hyphasis; but the hill, which was fortified round with carriages, is wanting: and Shawnawaz is 90 G. miles from Lahore, whilst Sangala was only 3 marches, that is, leſs than 40 G. miles from the place where the Hydraotes (Rauvee) was croſsed; which is supposed to be at the place where Lahore now stands.

It was something more than 2 marches from Toulumba to Jenjian, a town on the south bank of the Beyah, opposite to, and not far from Shawnawaz. As Timur's army was 3 days in paſsing the Beyah, some in barks, and others by swimming, it may be reckoned a considerable river.

At Jenjian, Timur staid 4 days, and was joined by Peer Mahmud, who had by this time taken Moultan. Timur's next station is Jehaul, 3 marches from Jenjian, on the road to Delhi: and here he separated from his grand army, which he directed to proceed by Debalpour, and to rendezvous at Samanah, a town 85 coſses on the west of Delhi; whilst he proceeded with 10,000 horse to Batnir, a strong fortreſs about 70 coſses from Jehaul, and far to the right of the Delhi road; being beyond the desert which stretches along the south side of the Setlege. He was led to this place, from resentment, at its giving protection to the people of Debalpour, who had maſsacred a garrison placed in it by Peer Mahmud: and poſsibly the great reputation it had for strength, might be one inducement to undertake the siege of it; as Aornos, in like manner invited Alexander.

Timur, after leaving Jehaul, proceeded the first day to Adjodin, or Pauk-puttun (of which we have spoken before), a town included in one of the large islands formed by the branches of the Setlege: here he visited, and spent some time in devotion, at the tomb of Sheik Furrid (see page 104), and then set forward for Batnir; which is stated, by Sherefeddin, at 60 coſses from Adjodin: 50 of

which, equal to about 95 B. miles, Timur is said to have marched in one day and night only, with a view to surprise the place.

On the south-east of Adjodin, a few cofses, he crofsed the river Dena; which I take to be one of the four branches of the Setlege (pofsibly the Dond), and perhaps the only principal one among them, except the Beyah, already noticed.

It must not be omitted, that Timur crofsed an extensive desert in his way to Batnir: I mention this particular to shew that Alexander was not misinformed, when he was told that there was a desert beyond the Hyphasis.* After taking and destroying Batnir, which employed only a few days,† he marched on the 30th of November, taking a very circuitous road to Samanah; where he joined his grand army on the 8th of December, 1398. It is not easy to collect the distance, from Sherefeddin's account of the marches; and no rule can be applied to the marches of a party of horse, as to those of an army in general. For certain points in the march of Timur, between these places, see pages 76 and 77.

His march from Samanah to Delhi, about 85 cofses, appears to have taken up 12 days; whence we may collect, that the common marches of his grand army, were about 7 common cofses each day; or about 13½ British miles, by the road.‡

* Quintus Curtius.

† Batnir is represented as a very strong place, and yet Timur is said to have taken only a body of horse with him (and indeed the extraordinary length of one of his marches seems to prove it).

‡ The mean length of the marches of great armies, is more susceptible of rule; and, of course, more useful in its application to geographical purposes, than may be at first imagined. I shall here mention the result of my inquiries concerning Indian armies only; that being the point to my purpose. The mean of 95 marches, where the measured distances are given, is equal to 14,6, or about 14½ B. miles (that of European armies in India, is considerably leſs). These 14½ miles of road distance, may be allowed to produce 11 G. miles of direct distance, when applied to geography, on lines of considerable extent: although each individual march might produce half a mile more, by the *compound* winding being laid out of the question (see page 6 and 7).

The march and retreat of the Greeks from Natolia to Trebizonde, give, at a mean, only 15 British miles for each march; reckoning Xenophon's parasangas at 3 Roman miles (as M. D'Anville does, in his *Meas. Itin.*); and, it is pretty evident, both from the space marched through, and from other circumstances, that his number of parasangas is taken too high.

On his return, he made an excursion to the north-east, into the Dooab, took the city of Merat (called Mirte by De la Croix), 23 coſes from Delhi, and advanced to the Ganges, near the place where it iſsues out of the Sirinagur mountains. Toglocpour, and the straits of Coupele, two places of victory on the eastern bank of the Ganges, cannot now be recognized: but from Sherefeddin's account of the march, they cannot be far from Loldong; where the British army completed their campaign in 1774, 1100 British miles from Calcutta. *

From the banks of the Ganges, he proceeded to the north-west, along the foot of the Sewalic mountains, by Meliapour, Jallindhar, and Jummoo, to the Indus, which he croſsed at the same place as before, and in the same manner; and returned to Samarcand by way of Bunnoo, or Banou, Nughz, or Nagaz, Cabul, Bacalan, and Termed.

I come now to the subject of Alexander's route, through the countries on the east of the Indus; where alone I can follow him with any degree of certainty: and this certainty may be ascertained by tracing his route either way, from the celebrated conflux mentioned in page 118. I take it for granted that he croſsed the Indus, † at, or near the site of Attock; because, as we have seen in page 114, it is the paſs leading from the quarter of Cabul and Bijore: from whence Alexander came; as will be shewn when we diſcuſs the geography of the countries of India, lying west of the Indus. The fortreſs of Attock was built by Acbar, to command this paſs; which is so confined, either by the nature of the banks, or of the channel of the river, or both, that the paſsage from the

* At the time of Timur's conqueſt (1398) the British nation had scarcely been announced to the people of Hindoostan; nor was it till 200 years afterwards, that they found their way thither. Who could have believed that the British conquests would meet those of Tamerlane, in a point equidistant from the mouths of the Ganges and Indus, in 1774?

Capt. Kirkpatrick informs us, that a place named *Calpee*, occurs in Abdul Humeed's account of an expedition to the borders of Sirinagur, near the place where the Ganges iſsues from the mountains; and which he supposes may be the place meant for Coupele in Sherefeddin. A MS. map in my poſseſsion, describes a river *Peely* which joins the Ganges 10½ miles below Hurdwar, with some mountains near the conflux: *Qu.* if this be not Coupele, or *Kob-Peely?*

† About 327 years before Christ, according to Usher: and in the month of May.

landing-place leads through the very fortreſs itself.* As soon as Alexander had croſsed over to Taxila,† on the east side, Ambisares, king of the Indian mountaineers (the predeceſsors of the Ghickers, we may suppose), sent ambaſsadors with presents to him: as the chiefs of the Joudis afterwards made their submiſsions to Tamerlane, in 1398. From Taxila, as his intention appears to have been to penetrate to the Ganges, he may be supposed to have gone by the ordinary road, to that part of the bank of the *Hydaspes* (Behut or Jhylum) opposite to the place where the fortreſs of Rotas now stands; and here he put into execution his stratagem for croſsing the river, while the opposite shore was poſseſsed by Porus. It might admit of a doubt whether Alexander came by the way of Rotas, or by that of Bheerah, did not the length of the voyage down the Hydaspes, to the conflux of the Acesines (after his return from the Hyphasis), seem to prove that the fleet was constructed at a greater distance than 48 G. miles, above the conflux. The fleet was five days in dropping down with the stream. Hephestion and Craterus were dispatched by land, previous to the sailing of the fleet; and were overtaken on the third day of the voyage: nor did they afterwards arrive at the conflux, till Alexander was returned from his first expedition to the confines of the Malli. It may be 11 days march from Rotas to the conflux: $4\frac{1}{2}$ only, from Bheerah to it.

After Alexander had croſsed the *Acesines* (Chunaub) and *Hydraotes* (Rauvee), which latter he may be supposed to paſs near the place where Lahore now stands, he appears to have been drawn out of the direct route towards the Ganges, to attack the city of Sangala, most probably lying between Lahore and Moultan; but we are left in uncertainty as to its position, by Alexander's historians, otherwise than by circumstances, and detached facts. The

* Kirkpatrick's MSS.

† Taxila, then, must have stood on, or near to the site of Attock: or at all events, it must have been near the Indus, to allow of its being 120 miles from the Hydaspes, or Behut. See the notes, page 51: and also the Indian Itinerary of Pliny, in Book VI.

name Sangala, occurs only in Arrian: and is said to have been a city of great strength and importance, in the country of the Cathei. Diodorus Siculus calls the same people *Catheri*, or *Katheri*; and these may very easily be recognized under the name of *Catry*, in Thevenot; that is to say, the *Kuttry* tribe, or Rajpoots. Thevenot speaking of the people of Moultan, says, "there is a tribe "of Gentiles (i. e. Gentoos, or Hindoos) here, called Catry, or "Rajpoots; and this is properly their country, from whence they "spread over all the Indies." Diodorus Siculus marks them by the custom of their women burning themselves alive, on the funeral piles of their husbands; which is indeed a custom among them, as well as some other Hindoo tribes, at this day. Now we find by Arrian, that the Cathei were confederated with the Malli and Oxydracæ, that is, the people of Moultan and Outch, and which lay to the south-west of the place where Alexander might be supposed to crofs the Hydraotes (or Rauvee) in his way into India. (That the Malli were the people of the present Moultan, we can have no doubt, if we attend to the circumstances of the voyage of Alexander down the Hydaspes, hereafter.) I find no difficulty therefore, in determining the position of Sangala to be to the SW of Lahore. As to the distance, Alexander reached it the third day after crofsing the Hydraotes; and we cannot allow lefs than 48 road miles, for these 3 marches; or 36 G. miles in horizontal distance. Had Alexander's route been S E towards the Ganges, the above distance would have brought him within 6 or 7 miles of the *Hyphasis* (the modern Beyah), and Arrian says not a word about that river, until Alexander had returned to Sangala from the pursuit of the fugitives, and again set forward on his march. No idea is given either in Arrian, Diodorus, or Quintus Curtius, of the distance between Sangala* and the Hyphasis; but it may be collected by Arrian's manner of speaking, that they were not near each other.

* Although Diodorus and Curtius do not give the name Sangala, yet the city meant by Arrian, under that name, is pointedly described by them.

Diodorus places the kingdoms of Sophites and of Phigeus between the Catheri and the Hyphasis; whence we may infer a considerable space between them. If I am right in my conjecture concerning the position of Sangala, the Hyphasis (Beyah) must be about 40 miles from it, eastward; and let Sangala be where it will, the river Beyah answers to the Hyphasis, or Hypasis (called anciently by the natives, Beypasha), and Alexander's altars may probably have been erected between Govendal, and the conflux of the Beyah and Setlege, at Firosepour; Pliny says on the further, or eastern side of the river. One cannot help regretting the extreme brevity of this part of Arrian's narration, with respect to the detail of Alexander's marches, between Sangala and the Hyphasis, and back again to the Hydaspes; which is dispatched too rapidly for a geographer to profit by. Diodorus and Curtius are not more explicit; nor indeed, if they had, are they to be much depended on, in this respect; for they have confounded the Hydaspes (Jhylum) with the Acesines (Chunaub), in their account of Alexander's voyage. But, I think, whoever takes the trouble to compare Arrian's account, both of the land marches, and the voyage down the rivers, with the geography of the Panjab; will find the ancient *Hydaspes* in the modern Behut, or Jhylum, the first river beyond the Indus; and succeſsively, the *Acesines* in the Chunaub; the *Hydraotes* in the Rauvee; and the *Hyphasis* in the Beyah: though I will not contend for the exact position of the altars, whether they might be above the conflux of the Beyah, or below it: only the ancient name *Beypasha*, appears more likely to have been the origin of the Greek Hyphasis, Hypasis, or Huphasis; than *Shetooder*, which was the ancient name of the Setlege.

As M. D'Anville's account of Alexander's progreſs in the *Antiquité Geographique de l'Inde*, supposes that the Behut (he calls it Genave), the westernmost of the Panjab rivers, was the Indus of Alexander: but it is neceſsary to observe, that M. D'Anville's opinion was formed on the supposed certainty of that monarch's

having only four rivers, between him and the country of the Prasii, when he had croſsed the Indus. That prince of geographers, when he determined this question, had not the true geography of the Panjab before him: and, in fact, Alexander had all the five rivers of the Panjab to croſs, after he arrived on the east side of the river, which he ſupposed to be, and which was in reality, the Indus.

There is a flat contradiction between Arrian and Diodorus (and Curtius who follows the latter), regarding the quality of the country on the east of the Hyphasis; the former describing it as a flourishing and well-inhabited country; the latter say there is an extensive desert between it and the Ganges. Arrian's account suits the upper part of the river, and that of Diodorus and Curtius, the lower part; for there is certainly a desert, as has been before observed, between the Panjab and Batnir.

We are left to suppose that Alexander, after the determination of his army to proceed no further, returned to the Hydaspes, by the route he came; bating the ground he lost in marching after the Catheri: and finding his cities of Nicæ and Bucephalia completed; and a fleet, or part of one, built out of the timber procured from the neighbouring mountains, named by them *Emodus* and *Himaus* or *Imaus*, he proceeded down the Hydaspes with his fleet, while the greater part of the army marched by land.

Here it may be proper to observe, that Arrian does not say from whence the timber came, but leaves us to suppose that it came from the forests nearest to the river; and enough is known of the nature of the country, to convince us that the forests bordering on the foot of the Cashmerian hills, were very near to the river Hydaspes. The mountains Emodus and Imaus indeed, were at a very great distance, and could be *only in sight* to the N E; since they are in effect, the mountains which extend from the Ganges, above Sirinagur, to Cashmere; separating the dependencies of Hindoostan, from those of Great Thibet. I suspect Emodus and Imaus to be

different readings of the same name; and Imaus or Himaus, we have every reasonable proof, of being derived from the Sanscrit word *Himmaleb*, signifying snowy. That vast ridge bears the same name at present; and Pliny knew the circumstance well.*

It is unlikely that Alexander, so far from visiting Cashmere, as some have thought, ever had heard any distinct account of it; otherwise some of the writers of his life would surely have taken notice of so extraordinary a country: nay, I conclude, according to my idea of Alexander's character, that he would certainly have visited it, when he returned to the Hydaspes, to embark for the Indus; and was, in some degree, at leisure; if a man who is eternally preparing work for himself, can be said to have any leisure.

Alexander sailed from his first place of embarkation in the Hydaspes, about the middle of November N. S. 327 years before Christ (according to Usher), having, of course, been in the field the whole rainy season; for he croſsed the Indus in May. In five days, the fleet arrived at the conflux of the Hydaspes and Acesines (Jhylum and Chunaub), the identity of which, is most pointedly marked (as we have before observed) by the nature of the banks; and by the rapidity and violence of the stream, which dismayed the whole fleet, and proved fatal to some of the large ships.

At this place, Philip, who had led a division of the army along the banks of the Acesines (whose course is not far from that of the Hydaspes, and gradually approaches it, until they meet), joined the grand army, and was ferried over the Acesines. We may observe from this, and from Craterus and Hephestion being detached with the other two divisions, along the opposite banks of the Hydaspes, that Alexander might be said almost to sweep the whole country. He now approached the confines of the MALLI, and set out on his *first* expedition with a detachment, against the people of the country bordering on the Malli, to pre-

* Imäus, incolarum lingua nivosum significante. PLINY, Book VI.

vent their giving aſsistance to that nation; but the particulars of his march are not recorded. He returned again to the fleet and army at the conflux of the Hydaspes; and from thence dispatched the fleet to the next place of rendezvous, at the conflux of the Hydraotes (Rauvee) with the Acesines (Chunaub); for so the confluent streams of the Hydaspes and Acesines were named, the Acesines being the largest;* and as the Hydaspes is said to be 20 stades in width the whole way, the other must have been an immense river. The army was divided into four divisions, three of which marched at a considerable distance from each other, along, or near, the course of the river; the fourth, Alexander took the command of himself, and marched inland from the river, to attack the Malli on that side; in order to drive the fugitives towards the forks of the rivers, where they might be intercepted by some of the other divisions. The line of direction of his march must have been south, or south-eastward. On the second morning he took a strong city, and Perdiccas, another; and after a second long night march, arrived at the Hydraotes (Rauvee): perhaps, we may allow for the day, and two night marches, 40 road miles; or 30 G. miles of horizontal distance.† He fell in with the river at some considerable distance above the conflux (the appointed rendezvous for the fleet), as appears by what followed: and after croſsing it, took two other towns,‡ and then proceeded to the capital city of the Malli; after dispatching Pithon back to the river side, to intercept the fugitives. This capital of the Malli, must not be mistaken for the modern Moultan; which is at least 30 miles by land, below the conflux of the Hydraotes; or two days voyage

* It would appear, by the description of the Acesines by Ptolemy, quoted by Arrian, that this was by far the largest of the Panjab rivers.

† The Ayin Acbaree reckons 27 coſses, or 51 B. miles, between the two confluences of the Hydaspes and Hydraotes with the Acesines; but this account includes the windings of the channel.

‡ One of these was a town of Brachmans, or Bramins. Some of them burnt themselves, together with their houses; and few came alive into the enemy's hands. This mode of conduct has been practised in our own times. See Orme's Indostan, Vol. II. p. 255.

for a boat going with the stream:* but the ancient capital in question, was above the conflux, and near the Hydraotes (Rauvee), by the garrison's leaving it, and retiring to the opposite (north) side of the river. Alexander recrofsed the river after them, but finding them too strong to be attacked with the party he brought with him; and waiting for a reinforcement; the enemy had time to retire into another fortified city, *not far off*. This *nameleſs* city, is the place where Alexander was wounded, and in such imminent danger; and not in the capital of the Malli, nor among the *Oxydracæ* (Outch), which is on the opposite side of the Acesines (Chunaub), and near its confluence with the Indus. Indeed Arrian is particular in pointing out this error [of Diodorus] As to the distance of this city above the conflux, we may collect that it could not be very far, both by reason of the quick communication between Alexander, and the camp and fleet; and by the ground he had marched over, after leaving the first conflux. I am inclined to place it about 10 G. miles above the conflux (of the Chunaub and Rauvee), and a few miles from the north bank of the latter; and the capital of the Malli on the opposite side, and not far from the river bank; so that they will be somewhat below the present town of Toulumba, which has been mentioned as a famous paſs on the Rauvee, between Lahore and Moultan.

When Alexander was sufficiently recovered from the effects of his wound, he was embarked on the *Hydraotes*, and carried *down the stream*, to his fleet, which appears to have been brought into the Hydraotes; for we learn that he paſsed the conflux after he joined the fleet.†

We learn also, from the same author, that the Acesines preserves its name until it is lost in the Indus, although it receives the Hydaspes and Hydraotes: the historian of Timur, in like manner, gives the name of Chunaub to the confluent waters of the Jhylum

* Itinerary, 1662. † Arrian.

and Chunaub: this alone, however, does not prove that it was the largest river; for we have many examples, in modern geography, at least, where the adjunct river, though the smallest, gives its name to the confluent waters. It is worthy of remark, that Arrian, as it appears, not knowing what became of the Hyphasis (Beyah) does not say that Alexander *saw* the mouth of it, as he did those of the Acesines and Hydraotes; but only informs us that *it fell into* the Acesines. And indeed, the truth is, that these rivers, under the modern names of Beyah and Setlege, do not join the Chunaub; but, after uniting their streams, fall into the Indus, a great way farther down. It is certain that the courses of rivers, even of the largest, do alter so much, in time, that what Arrian says might have been the case; but there is no neceſsity for supposing it.

Arrian, as well as Sherefeddin, informs us that the lower part of the Panjab, towards Moultan, is flat and marshy, and inundated [like Bengal] by the periodical rains, which fall between the months of May and October. As a proof of it, Alexander was once obliged to break up his camp, on the Acesines (Chunaub) and retire to the higher grounds.

From the conflux of the Acesines with the Indus, we accompany Alexander, succeſsively to the territories of the Sogdi, Musicani, Oxycani, Sindomanni, and Patalans. The Oxydracæ, who had submitted by their ambaſsadors, were left unmolested. Bhakor answers nearest to the position and description of the country of the Musicani, which was next to the Sogdi, and the most powerful on that part of the Indus: and the Oxycani, the next in order, to Hajycan; a circar, or division of Sindy. In Sindomanni, we may recognize the country of Sindy; or that through which the river Sinde flows, in the lower part of its course: and Pattala, has ever been referred to the delta of the Indus. But so vast a change of names, or rather so vast a change in the manner of writing them,*

* A comparison of the modern names with the ancient, in many parts of Asia, leads me to conclude, that had they been faithfully written by the Greeks, much leſs difference would

forbids the building of any hypotheses, on the similarity of ancient and modern names of places; except in cases, where the locality is equally evident.

Having now conducted Alexander acrofs the Panjab, and down the Indus, to the head of its *delta*, it may not be amifs to observe, that the state of the country through which he pafsed, was very different from what we should have conceived, who have been in the habit of considering Hindoostan, as being governed by one monarch, or even as divided into several large kingdoms. In the Panjab country, in an extent lefs than is comprized within one of the soubahs, or grand divisions of the Mogul empire, we find no lefs than seven nations; and along the lower parts of the Indus, many more. Even in the Panjab, where Alexander warred a whole campaign, and part of another, there was nothing of that kind of concert appeared, which must have taken place between the governors of provinces, had they been under one head; but in general each acted separately, and for himself. The Malli, Catheri, and Oxydracæ, we are told, leagued together for their mutual defence; and this proves that they were separate governments. It is curious, that the same cause that facilitated Alexander's conquests in India, should also have given them the degree of celebrity that has ever accompanied them; that is to say, their subdivision into a number of small states: and ordinary readers, either not regarding, or not comprehending, their extent and consequence, have considered them as kingdoms. The conquest of the Panjab and Sindy, would, with such an army,* be no very great matter in our times, although united; and yet this conquest is considered as a brilliant part of Alexander's history: the truth is, the romantic traveller is blended with the adventurous soldier; and the feelings of the reader are oftener applied to than his judgment.

be found between them, than we now experience; and I am inclined to think that the names of the rivers, in particular, are scarcely changed since the time of the Greeks. Vanity has no share in new naming of rivers.

* Alexander had 120,000 men, and 200 elephants. Arrian.

But although the western part of Hindoostan was in this state, there existed beyond, or rather towards the Ganges, a powerful kingdom, as appears by the state Megasthenes found it in, when he resided in quality of ambafsador from Seleucus Nicator, not many years after, at Palibothra, the capital of the Prasii.* The Prasians probably owed to the discontents that prevailed in Alexander's army, their escape from a foreign conquest at that period.

Alexander arrived at Pattala about the middle of August (before Christ 326 years), and after he had made proper arrangements for the safety and conveniency of his fleet and army, and had viewed also the two principal mouths of the Indus, in which he experienced some degree of surprise, if not of terror, from the *bore*, or sudden influx of the tide;† he departed by land for Susa, leaving Nearchus with the fleet to follow, as soon as the Etesian winds‡ should cease. He had been more than nine months in sailing down the Hydaspes, and Indus. He crofsed the Hydaspes about the summer solstice in the preceding year, and of course had been in the field, or in some kind of warfare, during two rainy seasons: we are told, however, by the author of the Ayin Acbaree, that but little rain falls in the lower parts of Moultan: that is, the part bordering on the Indus. Nearchus sailed about the middle of October§ with the N E monsoon; conducting, according to Dr. Gillies, in his elegant History of Greece, "the *first European fleet* "which navigated the Indian seas." By the journal of this voyage, preserved by Arrian, it appears that the fleet sailed out of the western branch, by the distance between the mouth of the Indus and the river Arabius, which was only 1000 stadia; for Arrian gives the breadth of the delta at 1800 stadia, along the sea coast.‖ Arrian

* See the Introduction. † Ibid.

‡ The Etesian winds blew from the N E in the Mediterranean, in the months of July and August; and the ancients thought proper to apply the same term to the periodical winds of the same season in the Indian seas, although they blew from the opposite quarter.

§ The first of October, O. S. according to Usher.

‖ Pliny gives it 220 miles, so that he reckoned nearly eight stades to one of his miles.

takes notice, that when Nearchus *stood* out to sea, on the coast of India, he found either no shadow at noon; or else the shadow, if any, was projected southward. This, however, could not possibly happen, because Alexander did not arrive till after the summer solstice, nor till August. And yet Arrian took this from Nearchus's journal: but whosoever examines the geography of it, will find that he could never be within a degree of the tropic, allowing him to have sailed at any reasonable distance from the shore.

It may appear extraordinary that Alexander should, in the course of a few months, prepare so vast a fleet for his voyage down the Indus; especially as it is said to be the work of his army. But the truth is, that the Panjab country, like that of Bengal, is full of navigable rivers; which, communicating with the Indus, form an uninterrupted navigation from Cashmere to Tatta: and, no doubt, abounded with boats and veſsels ready constructed to the conqueror's hands. That he built some veſsels of war, and others of certain descriptions that might be wanted, is very probable; but transport and provision veſsels, I doubt not, were to be collected to any number. There were about 80 triremes; and the whole number of embarkations were near 2000. I think it probable, too, that the veſsels in which Nearchus performed his coasting voyage to the gulf of Persia, were found in the *Indus*. Veſsels of 180 tons burthen are sometimes used in the Ganges; and those of 100, not unfrequently.

CASHMERE is the only subject that remains to be discuſsed on the east of the *Indus*; which it owes to its particular situation in respect of the Panjab; being detached from it in point of geographical construction, as well as actually separated from it by strong natural barriers. The communications of Capt. Kirkpatrick, how full soever of information, on the subjects that have

been already discuſsed, are even abundantly more so in the present instance; for he has furnished me with translations of the most approved itineraries between Lahore and Cashmere, kept either by the Mogul emperors themselves, or by their order, and under their immediate inspection; and having the road distances contained in them actually measured; and the most remarkable objects that occurred on the way, noted with a great degree of precision. To account for this attention on the part of the emperors, it must be observed, that a journey to Cashmere, in the spring season, was regarded by them as the highest gratification that luxury could afford: every circumstance, therefore, which related to the communications with such a scene of pleasure, became interesting: for a perfect knowledge of the detail of each, would, of course, enable the royal visitors to determine the most eligible route, suited to seasons and circumstances. The reader may collect from Bernier (the most instructive of all Indian travellers), in what mode the emperors travelled to Cashmere; as he has written a full account of his journey, when he travelled thither in the suite of Aurungzebe, in the year 1664. And when we reflect on the burning climate he left behind him, to breathe the pure and temperate air of Cashmere, and to contemplate the beauty of its scenery, we must not fail to applaud the taste of the emperors, who indulged themselves in so elegant, and no leſs rational, a luxury.

Nor did Capt. Kirkpatrick content himself with bare translations of the itineraries; but, in the true spirit of science, added comments and explanations, when the nature of the subject appeared to require it: *without* which aids I might frequently have fallen into error; and *with* which, little remained for me to do, but to effect the geometrical construction. I shall have great occasion to rejoice, if the histories from whence he has extracted these, and other geographical materials, should hereafter appear in an European language, through his means: and yet

more, if they may be in the smallest degree illustrated, by my labours.

His inquiries have produced three measured routes leading into Cashmere, from Lahore; and Mr. Forster's Travels, a fourth, in which the distances are estimated only. The first route to be considered, in the construction, is the shortest of the measured ones, in order to obtain the most direct line of distance between Lahore and Cashmere: and this is the Bember route, of which that portion between Lahore and Bember itself has been already considered, both as to bearing and distance, in page 85; and may be corroborated by a reference to the position of Jummoo, in page 106; since Rotas, Gujerat, and Sealkote, are regulated by the points of Jummoo and Lahore. Accordingly, Bember is taken at 33 Acbaree cofses from Lahore, on a bearing of N $\frac{3}{4}$ W. And it may be concluded, as the road to Cashmere by Bember is very straight, that the whole lies nearly in the same line of direction as that portion of it between Lahore and Bember; or rather, of the ascent named the *height of Bember*, which appears to be a very few miles to the eastward of the fortrefs, and may bear from Lahore, about N $\frac{1}{4}$ W: Sirinagur, the capital of Cashmere, therefore, may be supposed to lie in the same direction. The distance on this line, according to a measured route of the Emperor Acbar, was 79,9 Acbaree cofses, which, at the rate of 31,16 to a degree (see page 85, and note), produce 153,6 G. miles of direct distance. But as the road lies over three mountainous ridges, named *Ruttun-Punchal*, *Peer-Punchal*, and *Nari-Birari*, which take up more than 26 miles; perhaps $\frac{1}{4}$ may be allowed for windings, in this part. And for the Bember, and other heights, some farther deduction should be made; and then the whole distance may be taken at 150 G. miles, instead of the original 153,6. However, as I suspect that Acbar's measurement did not commence from the centre of Lahore, but from the suburbs, I shall take 151 for the distance of Sirinagur, which in the direction of N $\frac{1}{4}$ W, places that city in

latitude 34° 20′ 30″; and in longitude 73° 44′; or 6 minutes only west of Lahore. And Bember, by the same adjustment of distance, will be $64\frac{1}{2}$ G. miles from Lahore; the 33 Acharee cofses giving about $63\frac{1}{2}$ G. miles.

The Oriental tables give for the latitude of Cashmere, or Sirinagur (for the capital is known by either of those names), 35° 15′; meant perhaps for 34° 15′. Its longitude, in the same tables, is quite out: being more than a degree to the west of Lahore. It is certain, that according to the authorities on which we have determined the positions of Lahore, Attock, and Cabul, that of Cashmere must come no farther to the west, than the construction allows: and one very strong circumstance in favour of this argument is, that the space between Cashmere and Cabul, in the map, is no more than is required for the dimensions of the several provinces that lie between them; according to their description in the Ayin Acbaree, and in Capt. Kirkpatrick's MSS. This matter will be fully discufsed, when we speak of the countries west of the Indus. Nor does Cashmere seem to be misplaced in respect of the surrounding countries, as far as our knowledge goes; for in the Ayin Acbaree, Puckholi is said to lie on the west, and the territory of the Ghickers to the S W; which agrees also with the map. It also accords with the measured routes between Cashmere and Attock; and with Mr. Forster's idea of the bearing from Jummoo, which was N by W.

A second measured route was that from Lahore to Cashmere, by way of Hufsan-Abdal and Puckholi; a remarkably circuitous one, but used for the purpose of entering Cashmere during the height of the spring, in order to enjoy its beauties in that delightful valley; which, although in a metaphorical sense, the region of perpetual spring, was, of course, the most attractive during the actual spring, the blofsoming season. And this could not be effected by the more direct road of Bember; because that leads over vast mountains, which the snow renders impafsable during not only the spring, but also part of the summer. But the Puckholi, or Hufsan-Abdal

road, leads into Cashmere through the valley, or pafs, by which the Behut iſsues; which being much lower, is, of course, exempted from snow. (See p. 99.)

Hufsan-Abdal lies in the direct road from Rotas to Attock, 12 royal cofses, or about 24¼ G. miles, to the eastward of the latter: and this point of Hufsan-Abdal being thus fixed, it becomes unnecefsary to take notice of any other part of the route, save that between it and Sirinagur. The distance between these places was 75¼ Acbaree cofses, by a measured route of Jehanguire;* but it being very circuitous, the different portions of it require a separate discufsion; and cannot, after all, be applied with succefs, without a reference to Mr. Forster's idea of the bearings between Sirinagur, and Bazaar, his station on the Indus: and as the outlet of the Behut river regulates the direction of the *first part of this line*, which makes a considerable angle with the rest, it becomes necessary, in the first instance, to examine and fix the position of the valley of Cashmere itself; with a view to ascertain the place of this outlet, rendered famous under the name of the Pafs of Barehmooleh.

1st. Mr. Forster says (Vol. I. p. 225), that the valley extends from S E to N W (perhaps, more correctly, S E by E, and N W by W): he entered it by the S E, and traced the general course of the river Behut, north-westward, to Sirinagur; which is situated towards the middle of the valley of Cashmere.

2d. The Ayin Acbaree describes the general situation of several of the districts of Cashmere, all which prove that the course of the Behut is from S E to N W: for its source is said to be in Wair or Weer Purgunnah, situated in the S E quarter from Sirinagur.† Eencha, or Uneej, Purgunnah, called also Islamabad,‡ lies on the S E; and the town of Islamabad itself, to which Forster came, is

* The cofs of Acbar was used also by his son Jehanguire; and that of Shah Jehan succeeded it.

† Ayin Acbaree, Vol. II. article Cashmere. ‡ Kirkp. MSS.

5 or 6 miles below the spring of Wair. Punjbareeah, and Pampour, two towns between Islamabad and Sirinagur, are in Uneej and Veh Purgunnahs; both of which lie on the east of Sirinagur. Soliman's Mount, near the river, is also in the same quarter.* So that the general course of the Behut *above* Sirinagur, is clearly from the south-eastward; and it makes a deep bend to the north, by Punjbareeah and Pampour. The distance by water from Sirinagur to the head of the Behut, is 22 measured royal cofses; by land 14; or about 28¼ G. miles.†

3d. Capt. Kirkpatrick quotes Abdul Humeed, to prove that the Behut proceeds from the *south* to Sirinagur, and pursues a N course from that city. It should rather be N W; because the Ayin Acbaree, Vol. II. p. 109, states that Geyehamoon ‡ Purgunnah lies to the N W of Sirinagur (and it appears from other circumstances, at the extremity of the valley); and in page 166, that Ouller (or Tal) lake, lies near it, and receives the river Behut (Abdul Humeed and Bernier, both relate the same, concerning the river and lake); and also that this lake is near Little Thibet, which in the account of the boundaries, in page 152, is said to lie on the N W of Cashmere; as Great Thibet does on the N E. The lake is said to be of great extent; no lefs than 53 B. miles in circuit; or perhaps 16 or 17 acrofs; which account allows it to reach to the frontiers of Little Thibet, without violence to the statement of the distance between Sirinagur and Barehmooleh (the outlet of the Behut) which is no more than 11½ royal cofses by land; 14 by water. These circumstances considered, we can have no doubt that the course of the Behut is to the N W, from Sirinagur to the lake: but the length of its course, in this direction, we are not told; any more than the length and direction of its course, from the lake, to its entry between the mountains at

* Ayin Acbaree, Vol. II. article Cashmere. † Kirkp. MSS.

‡ Supposed by Capt. Kirkpatrick to be the same with the district of the RAJAH GAMON, mentioned by Bernier.

Barehmooleh. It may, however, be inferred, that the greatest part of the 14 cofses by water, *is to the lake* (considering that the valley of Cashmere extends 40 B. miles to the N W from Sirinagur); and that the course of the Behut, after its efflux from the lake, is short, and towards the S W quarter: by which, Barehmooleh, will take a W by N, or W N W position, in respect of Sirinagur.

The route to Cashmere by Punoach (the 3d of the measured routes), throws some light on the position of Barehmooleh, in respect of Sirinagur. The Punoach road branches from that of Bember, at Thunah, 23¾ Acbaree cofses short of Sirinagur; and crofses the mountains far to the west of Peer-Punchal.* The distance from Thunah to Barehmooleh, is 28 royal cofses, or 56½ G. miles, by the ordinary calculation: but as an allowance must be made for the ground lost by the steepnefs of the mountains, as in the Bember road (page 134), 53 G. miles may be taken for the direct distance; and Barehmooleh will bear W by N ¼ N from Sirinagur. The distance may be taken at 23¼ G. miles.

Having placed Barehmooleh, the nearest point in Jehanguire's route from Sirinagur to Hufsan-Abdal, I proceed to examine the remainder of that route; the bearing of which will best be understood by a reference to Mr. Forster's remarks. He supposed Muziffer to bear W by S, 71 cofses from Sirinagur; and his station on the Indus 64 cofses from Muziffer, S W, and S by W. These, compounded, give a course of W 35° S, 120 cofses: and according to my construction, it is W 28° S, 136 G. miles. The bearings do not materially differ, the nature of the materials being considered: the distances certainly appear very different; for if Mr. Forster's was taken absolutely, it would place Sirinagur more to the east than even my construction warrants, by 30 or 40 miles; which is more improbable, than that he should either have estimated his cofs too low, or have taken so circuitous a route, as

* The distance from Lahore to Cashmere, by the road of Punoach, is 93 royal cofses.—*Kirkp. MSS.*

to sink the quantity of his horizontal distance very considerably. The fact is, that the standard of his cofs is very short all the way from Oude: and moreover, he remarks that his party avoided Puckholi, and other places that are implied to lie in the direct road, through motives of prudence. I shall therefore content myself with reflecting, that his line of bearing differs only 7 degrees from my supposition; and regard the position of Sirinagur, as generally true in respect of Attock and Hufsan-Abdal.

Jehanguire's measured distance between Barehmooleh and Hussan-Abdal, is 63½ Acbaree cofses, which on ordinary roads might produce 122¼ G. miles: but as 25 cofses of the road between Barehmooleh and Mooker, is along the rugged and winding pafs, through which the Behut forces itself, in its escape from the valley of Cashmere, a considerable reduction must take place. There are also some high ridges to be crofsed between the Kishengonga and Puckholi: and all these together may reduce the 122¼ on ordinary ground, to 116 in this place: for this is the space that the construction leaves, between Barehmooleh and Hufsan-Abdal. And this being allowed, Sirinagur, or Cashmere, ought to take the position afsigned it, at 6 minutes of longitude west of Lahore.

A fourth road to Cashmere (but not measured) is that of Mr. Forster from Jummoo, through Kishtewar. I am inclined, from the similarity of names, to suppose this to be the road mentioned in Capt. Kirkpatrick's MSS. under the name of Jowmuk, or Chowmuck: and which Abdul Humeed states in the grofs (for no particulars are given) at 102 cofses (I conclude, of the royal * standard) from Lahore.

I do not mean to rest any part of my argument, for the position of Cashmere, on the result of this route; on the contrary, I have formed the line of Mr. Forster's route from Jummoo, with a reference to the position of Cashmere, inferred from the former *data*.

* This was the standard, uniformly made use of by Abdul Humeed.

Mr. Forster estimated the general bearing from Jummoo to Cashmere, at N by W; which agrees with the former *data*: but the detail of the route leads first N E by E, or more eastwardly, to the crofsing place of the Chunaub river; and thence north, and N W. The occasion of this great bend in the road, is to gain a convenient crofsing-place over the rapid Chunaub; and the transit is effected by means of a large basket, drawn along a tight rope, extended from one high rocky bank to the other. The breadth is 70 or 80 yards.

In Capt. Kirkpatrick's MSS. we find the detail of an expedition from Cashmere into Kishtewar, during the reign of the Emperor Jehanguire (A. D. 1619). The capital of Kishtewar is described to lie near the east bank of the Chunaub river, at 60 cofses from Sirinagur.* These cofses were of the common standard, I apprehend; and the route of the army was over Peer-Punchal: therefore very circuitous. The length of this march, however, confirms Mr. Forster's statement of the bearing of the road, to the crofsing-place of the Chunaub; and shews that the course of that river is pretty uniform throughout.

Mr. Forster reckoned 96 cofses between Jummoo and Sirinagur; of which, 46 were between Jummoo and the paſsage of the Chunaub; and the remaining 50 between the Chunaub and Sirinagur; and of this number, 18 were by water, down the stream of the Behut, from Islamabad, or Eencha (see page 136).

The valley of Cashmere appears to be of an oval form, and to have its largest extent from S E to N W; or perhaps more strictly from S E by E and N W by W. Mr. Forster reckons its dimensions 80 British miles, by 40. From the measured distances already exhibited, between *Wair*, the head of the Behut, and Barehmooleh, where the Behut leaves the valley; we collect that the distance between those places, through Sirinagur, is $25\frac{1}{2}$ royal

* The name of this capital appears to have been Mundul, or Mundul-Muder; and its situation 3 cofses east of the river Chunaub (Kirkp. MSS.). By circumstances, it ought to be near the place where Mr. Forster's route crofses it.

cofses; answering to about 51½ G. miles; but as Sirinagur lies out of the direct line between the two (as is proved by the construction), perhaps 50 G. miles, or 58 British, may be the true distance. But this is not the greatest extent of the valley; since it has been shewn that the Ouller lake, by its position and dimensions must neceſsarily extend to a point much more distant from Sirinagur, than Barehmooleh does; although the exact quantity of the distance cannot be ascertained. And on the other hand, Mr. Forster entered the S E end of the valley at *Durroo*, or *Surroo*, 5 cofses before he came to Islamabad: of course, Durroo must lie beyond the head of the Behut. These circumstances considered, Mr. Forster's estimate of 80 British miles for the length of the valley, supposing it to be meant for the flat part of it, appears to exceed the truth by a very few miles only; for 74 or 75 can very clearly be made out. But he reckoned it only 40 in breadth, which appears much too little; and I suppose it to be 50, or more: for Heerapour, at the entrance of the valley from the side of Bember (the south side), is 11 Acbaree cofses, or nearly 25 British miles, acrofs from Sirinagur; and Lar, according to Bernier, is about as far from Sirinagur, as Barehmooleh is; 27 B. miles: but as Sirinagur does not lie directly between Heerapour and Lar (for the former bears about S from Sirinagur; and Lar, by the Ayin Acbaree, is in the N E quarter from Sirinagur), a considerable angle takes place, and may probably reduce the 52 miles, to 50 in direct distance.

By order of Jehanguire, the length and breadth of the province of Cashmere, or rather, probably, the roads through and acrofs it, were measured; and the dimensions, 56 Acbaree cofses, by 27, were registered accordingly (Kirkp. MSS). But these dimensions regard the *political boundaries* only: because Bholbas, the western frontier, is said to be 18½ of these cofses within the mountains below Barehmooleh. And in the opposite, or south-east quarter, the valley of Banhal, a dependency of Cashmere, lies at

the distance of several coſes beyond the great circle of mountains that surrounds the valley of Cashmere (Forster, Vol. I. p. 224). This district of Banhal is placed in the Ayin Acbaree on the south-east of Sirinagur (Vol. II. p. 108), and this may be adduced as a proof that Mr. Forster entered Cashmere by the south-east; and also that the valley of Cashmere has a S E and N W position.

As Jehanguire's measurement leaves at least 84 B. miles for the length of the valley above Barehmoolah, and 60 for the greatest breadth, it may be supposed that it included the slope of the mountains, as well as the level or hollow part of the valley; and that the term of the distance eastward, was the summit of mount *Kantel*, described by Desideri, as the common boundary of Cashmere and Great Thibet (*Lett. Edif.* Vol. XV. p. 190). The dimensions given in the Ayin Acbaree are not to be regarded, being estimated only; for Jehanguire's measurement took place long after that book was compiled. In the same book, we find Cashmere divided into two parts, namely, MERAJE, and KAMRAJE; the former being (as is expreſsed in Vol. II. p. 170.) the eastern part, and containing the districts situated to the east, the S E, and the N E, of Sirinagur: and the latter, the western part, containing the N W and S W districts.

With respect to general position, Cashmere is bounded on the west, by the district of Puckholi; on the S W by the territory of the Ghickers; on the S E by that of Jummoo; and on the east, by the river Chunaub: Great Thibet lies on the north-east; and Little Thibet on the north-west. In the Ayin Acbaree, from whence this account is transcribed, there is often a great want of accuracy in the article of bearings; and the intermediate points are often meant for the cardinal ones; and *vice versa*. But in the description of the boundaries of Cashmere, there appears to be more consistency than usual.

The capital of Cashmere has the same name as the province, according to Mr. Forster, and M. Bernier: but the Ayin Acbaree,

at an earlier period, names it Sirinagur.* It is a large city, and built on both sides of the river Behut, which has a remarkable smooth current throughout the whole valley (according to Mr. Forster); and this proves the remarkable flatnefs of the country, as the body of water is very large.

The valley or country of Cashmere, is celebrated throughout upper Asia for its romantic beauties, for the fertility of its soil, and for the temperature of its atmosphere. All these particulars may be accounted for, when it is considered, that it is an elevated and extensive valley, surrounded by steep mountains, that tower above the regions of snow; and that its soil is composed of the mud deposited by a capital river, which originally formed its waters into a lake, that covered the whole valley; until it opened itself a paſsage through the mountains, and left this fertilized valley, an ample field to human industry, and to the accommodation of a happy race: for such the ancient inhabitants of Cashmere undoubtedly were.

Although this account has no living testimony to support it, yet history and tradition, and what is yet stronger, appearances, have impreſsed a conviction of its truth, on the minds of all those who have visited the scene, and contemplated the different parts of it.

The author of the Ayin Acbaree dwells with rapture on the beauties of Cashmere; whence we may conclude that it was a favourite subject with his master Acbar, who had visited it three times, before Abul Fazil wrote. Other emperors of Hindoostan visited it also, and seemed to forget the cares of government, during their residence in *the happy valley*. It appears that the periodical rains, which almost deluge the rest of India, are shut out of Cashmere by the height of the mountains; so that only light showers

* In the revenue books, the province of Cashmere is written JENNET-NUZEER, or the PARADISE-RESEMBLING Soubah. (*Kirkp. MSS.*)

fall there: these, however, are in abundance enough to feed some thousands of cascades, which are precipitated into the valley, from every part of the stupendous and romantic bulwark that encircles it. The soil is the richest that can be conceived; and its productions those of the temperate zone. A vast number of streams and rivers from all quarters of the valley, bring their tribute to the Behut or Jhylum, the parent of the soil; a large navigable river, in which we recognize the famous Hydaspes of Alexander, who crofsed it about 100 miles below its outlet from the valley. Many lakes are spread over the surface, and some of them contain floating islands. In a word, the whole scenery is beautifully picturesque; and a part of the romantic circle of mountains, makes up a portion of every landscape. The pardonable superstition of the sequestered inhabitants, has multiplied the places of worship of Mahadeo, of Bishen, and of Brama. All Cashmere is holy land; and miraculous fountains abound. One dreadful evil they are constantly subject to, namely, earthquakes; and to guard against their most terrible effects, all the houses are built of wood; of which there is no want.

Among other curious manufactures, with which Cashmere abounds, is that of the shawls; which are distributed over all the western and southern Asia. We learn from M. Volney, that they even make a part of the dreſs of the Egyptian Mamlouks: and at present (as if to exhibit the most striking contrast in the claſses of wearers) they are worn by the English ladies. There remains no doubt, but that the delicate wool of which they are made, is the produce of a species of goat, either of that country, or of the adjoining one of Thibet. Notwithstanding the present extensive demand for shawls, the manufacture is declined to one-fourth of the former quantity; which may be easily referred to the decline of the Persian and Hindoostanic empires. Here are a species of sheep called *Hundoo*, which, like those of Peru, are employed in carrying burthens. The annual public revenue of Cashmere, in

the time of Aurungzebe, appears to have been only about 35,000l.* From what has been said above, it was, no doubt, a favoured province.

The Cashmerians have a language of their own, said to be anterior to the Sanscrit. And it would appear that they had also a religion of their own, different from that of the Hindoos. Abul Fazil says, "the most respectable people of this country are the "Reyshees, who, although they do not suffer themselves to be "fettered by traditions, are doubtless true worshippers of God." Nothing can exceed the liberality of mind both of Abul Fazil and of his master, the great Acbar: but the former appears to have caught some of the enthusiasm of *the valley*, by his descriptions of some of the holy places in it. To sum up the account of Cashmere, in the words of the same author, "It is a garden in perpetual "spring."

So far am I from doubting the tradition, respecting the existence of the lake that covered Cashmere, that appearances alone would serve to convince me, without either the tradition, or the history. It is a mere natural effect; and such, I apprehend, must be the economy of nature, in every case where the waters of a river, are inclosed in any part of their course, by elevated lands. The first consequence of this stoppage is, of course, the conversion of the inclosed lands into a lake: and if this happens near the fountains of the river, and the ground is solid, it is likely to remain a lake for ever; the river not having force enough in its infant state, to work itself a paſsage through the mountains. Hence it is that more lakes are found near the sources of rivers, than in the lower parts of their course. If the river be inclosed after it has gained a great acceſsion of water, and of course, strength; it will indeed at first, form a lake, as before; but in time, the place at which it runs

* Capt. Kirkpatrick's MSS. state the actual and realized revenues to have been about 25,000l. in the time of Shah Jehan; and only 20,000l. in that of Mahomed Shah.

over, will be gradually fretted away, as in the case of the Behut abovementioned. The Euphrates, in like manner, opens itself a paſsage through mount *Taurus*; and the Ganges through mount *Imaus:* and even though the base of the mountain be of the firmest texture, it will give way to the inceſsant friction, through a course of ages: for either of these paſsages may have been an operation of many thousand years. In the case of the Ganges, which paſses through mount Imaus, it may be supposed that the lower *strata* were softer than the upper; for the upper still remain, to a great height. In that of the Behut, the lake appears to have existed long enough to deposit a vast depth of soil, before it dispersed. The Cashmerian history names the lake SUTTY-SIRR: and adds, that Kushup led a colony of Bramins to inhabit the valley, after the waters had subsided.

From Cashmere, Mr. Forster went by a very circuitous route, to Cabul; the barbarous state of the people who inhabit the shores of the Indus, above Attock, making this precaution neceſsary. The countries in question are those of Puckholi, Sewad (or Sowhad), and Bijore; the scene of Alexander's warfare on the west of the Indus: all of which were subjected to regular authority, during the long and vigorous reign of Acbar. We are told by the Ayin Acbaree, that several of the streams that form the head of the Indus, yield gold dust: and this accounts for the circumstance of the Indian tribute being paid in gold to Darius Hystaspes; according to Herodotus (Book III.). The sum indeed seems too great, in proportion to what other provinces paid: but as the gold of the river *Pactolus* has been exhausted; so may that of the Kishengonga, in Puckholi, be diminished. Puckholi, I take to be the *Pactya* of Herodotus, Book IV. (as well as the *Peucelaotis* of Arrian), from whence Scylax set out to explore the course of the Indus, under the orders of the same Darius: for it lies towards the upper part of the navigable course of that river; being the frontier province of Hindoostan, east of the Indus. The Ayin Acbaree gives its

dimensions at 35 cofses, by 25; and says that it is bounded on the south by the districts of Attock. We know few particulars concerning it; except that the northern, and by far the greatest part of it, is mountainous. Its present capital of the same name, is at a considerable distance on the east of the Indus, and therefore cannot occupy the site of the *Peucelaotis* of Alexander; since that lay on the west bank of the Indus: but as Alexander advanced to this place, from the neighbouring district of *Bazira*, and the country of the *Aſsacani* (*i. e.* Bijore, and Ashenagur, which was the name of Sewad, only a few centuries ago), I very much suspect that *Peucelaotis* was the ancient name of *Puckholi*, and that an alteration of boundary, which has frequently taken place in other provinces, may have confined its limits to the east side of the Indus, in the present times; although it might anciently have extended farther to the west.

The first part of Mr. Forster's route from Cashmere, was down the course of the Behut, 14 cofses; at which point he disembarked, and struck to the westward, towards Muzifferabad; the capital town of a chief, who styles himself Sultan of a district of the same name, bordering on the south-west of Cashmere; the frontier of which was paſsed at 15½ cofses from the landing-place, on the bank of the Behut.

We have before taken notice that Mr. Forster croſsed the Indus at Bazaar, 20 miles above, or to the north-eastward of Attock. The greatest part of the way from Muzifferabad to Bazaar, was mountainous, and the country subject to petty princes of the Patan race. Mr. Forster entered the country of Timur Shah Abdalla, at Hyderbungee, a town about eight miles to the east of the Indus.

This route of Mr. Forster differed very considerably from the one of Jehanguire, above recorded: for the former left Puckholi, through which Jehanguire paſsed, to the south: but a place named Mangullee, occurs in both routes, between Puckholi and the

Indus*; and might be the point of separation of the Hufsan-Abdal, and the Bazaar routes. The river of Muzifferabad, mentioned by Forster, must have been the Kishengonga; and the Nhah, the Nainsook; both of which join the Behut.

From Bazaar, Mr. Forster proceeded by the road of Paishawur and Cabul, to Candahar, in his way to Korasan, and the Caspian. His remarks were of singular use in the construction of the map of the heads of the Indus, &c. in my former edition; but the communications of Capt. Kirkpatrick, have furnished matter so abundantly superior to any that could be collected by a casual paſsenger, that all Mr. Forster's observations between Cashmere and Cabul, are neceſsarily superseded: but beyond this point they preserve all their former value.*

Of the Countries belonging to HINDOOSTAN; *situated on the West of the* INDUS.

THE materials for describing the geography of the countries, on the west of the Indus, though but scanty, compared with those on the east; yet afford positions enough, to enable us to comprehend the form and extent of the tract, situated on the north of

* The history of this gentleman's travels is very curious. He proceeded by land from Bengal to the Caspian sea, and from thence by the ordinary route on the river Wolga, &c. to Petersburgh; in the years 1783 and 1784. It was neceſsary, from a regard to safety, to avoid the country of the Seiks; that is, Lahore: he accordingly croſsed the Ganges and Jumnah within the mountains, and proceeded to Cashmere by the road of Jummoo. He visited this celebrated country, I presume, through motives of curiosity, as it lay so far out of his way. From thence, croſsing the Indus about 20 miles above Attock, he proceeded to Cabul, the capital city of Timur Shah, King of Candahar; or more commonly known by the name of *Abdalla*. He meant to have proceeded from thence, through the country of Bucharia, or Transoxiana; but finding it too hazardous, he pursued the accustomed route of the caravans by Candahar. From this place, which has been supposed to be the *Paropamisus* Alexandria, his route was nearly in a straight line through Herat, to the south extremity of the Caspian; across the modern provinces of Seistan, Korasan, and Mazanderan; which were known to the ancients, under the names *Paropamisus, Aria, Parthia*, and *Tapuri*. It will be perceived that (as far as a comparison can be made) Mr. Forster traced back a considerable part of the route of Alexander, when in pursuit of Beſsus. As he tra-

Candahar; as well as a general idea of the courses of its principal rivers, and of certain ranges of mountains.

The principal points on which the geography of the above tract chiefly depends, have been already discufsed (in page 87, *et seq.)*: namely, those of Paishawur, Cabul, Ghizni, and Candahar. But those points on which the position and direction of the great ridge of Hindoo-Kho; the boundary of the province of Cabul, on the N W, depend; belong rather to the Persian, than to the Indian geography: therefore I shall reserve the discufsion of them, for their proper place; hoping, in due time, to submit to the judgment of the public, the result of my labours, in the attempt to improve the geography of Persia. I shall only mention, in this place, that the principal points of Bamian, Anderab, Ghourbund, and Badakshan; as well as many subordinate ones; are fixed, very satisfactorily to my mind, by means of materials in my pofsefsion; and from which the additional map, on a smaller scale is drawn. And by these it appears, that the part of Hindoo-

velled in the disguise of an Asiatic, and in the company of Asiatics, through a vast extent of Mohammedan country, where the religious prejudices of the natives, are nearly equalled by their political jealousy of all sorts of foreigners, we may pronounce the man who could perform such a task without suspicion, to pofsefs great presence of mind, and no lefs discretion; added to an uncommon share of observation of manners, and facility of attaining languages. Detection had been worse than death: and he was subject to continual suspicion from his fellow travellers, who were not in the secret. I hope he means to publish his observations on the manners, government, and present state of that part of Persia, of which we know the least: as well as of Cashmere, a subject yet more interesting to the philosopher and naturalist. It may serve to shew the extensive commercial intercourse, and credit, in Hindoostan, and the adjoining country (once dependent on it), notwithstanding the variety of governments it contains, and the unsettled state of the greatest part of them; that the bills of exchange which Mr. Forster obtained at Calcutta, were negociable at Cabul, 17 or 18 hundred miles distant; and the capital of a kingdom totally unconnected with, and pofsibly hostile in political sentiments, to that in which the bills originated. From the time he left the last British station in Oude, to the Caspian, in which he employed near a twelvemonth, and travelled 2700 English miles; he was compelled to forego most of the ordinary comforts, and accommodations, which are enjoyed by the lowest clafs of people, in European countries; sleeping in the open air, even in rainy and snowy weather; and contenting himself with the ordinary food and cookery of the country he pafsed through. Indeed it was barely pofsible to carry with him the means of procuring comforts, without hazarding his safety, as he was so long on the road.

*** The above note was written in 1788; and in 1790, the first volume of Mr. Forster's travels, including his journey from Bengal, to the borders of Cashmere, was published in Bengal; and the second was expected soon to follow. But I am sorry to add, that very late accounts from India, announce the death of this enterprizing traveller; which happened at the court of the Nizam, where he resided in a public capacity.

Kho,* which separates Cabul from Balk, and Badakshan, takes a N E direction, between Bamian and Anderab: after which, its *particular* direction is unknown to us (although its *general* direction, is unquestionably between the east, and north-east), until it appears again at the sources of the Jihon (or *Oxus*), at about 100 miles to the E of the city of Badakshan: and from thence, paſsing on to the north, it gives rise also to the Sihon (or *Jaxartes*). On the other hand, the ridge which separates Cashmere from Great Thibet; and Cashgar from Little Thibet (the true IMAUS, or HIMMALEH); appears to incline, in its northern course, towards the continuation of HINDOO-KHO, just described; and even to join it. Here then, we are to imagine an extensive tract, of a triangular form, whose base, of 200 miles, or more, is a line drawn from Cashmere, to the eastern confines of Anderab; and whose sides are the continuation of Himmaleh on the east, and that of Hindoo-Kho on the west. This space contains, amongst other countries, those of Little Thibet (or Balti-stan), and Sakita; the *Byltae*, and *Sacæ*, of Ptolemy; as also Kuttore, which answers to the *Comedi* of the same geographer: it also contains, as we have said in page 97, the sources of the Indus. From the descriptions of Little Thibet and Kuttore,† we may conclude that this whole space is mountainous; and that its general level is far elevated above the countries on either side of it. We have no particular information respecting the position of the range of mountains, which forms the base, or southern side of the triangle: but circumstances lead us to conclude, that the highest of these mountains, are far removed from the northern frontier of the provinces, subject to, or commonly regarded as a part of, Hindoostan: and that the mountains which properly constitute the boundary of Hindoostan, towards Kuttore or Caferistan), commence in the

* The term HINDOO-KHO, or HINDOO-KUSH, is not applied to this ridge, throughout its whole extent; but seems confined to that part of it, which forms the N W boundary of Cabul: and this is the INDIAN CAUCASUS of Alexander.

† Kirkpatrick's MSS. and Lett. Edif. Vol. XV.

parallel of Cashmere, or about 34½ degrees; and extending westward from that celebrated country, separate Puckholi, Sewad, and Bijore, on the south, from Caferistan on the north: and advancing from thence, to a junction with mount Hindoo-Kho, in the line between Cabul and Anderab, separate Lumghan (see page 113), which appears to have been the ancient frontier of Cabul, from those districts, which, after the time of Baber,* were added to, and have since become a part of, the province of Cabul; according to its defined limits in the Ayin Acbaree. On the north of this range, the whole country may be regarded as mountainous: on the south, the mountainous tract is confined chiefly to Sewad, Bijore, Teerah,† and a part of Puckholi.

The soubah of Cabul, under the Mogul emperors, comprehended the whole space between the Indus, and the mountains of Hindoo-Kho, in dimensions 150 cofses, according to the Ayin Acbaree: ‡ and this is its greatest extent; for 100 cofses are given for its breadth, between Kurrabagh and Chuganserai (in a north-easterly direction; its length being from S E to N W). Kurrabagh is known to be 11 royal cofses to the westward, or S W of Ghizni: and Chuganserai, according to the Emperor Baber, is a town, situated at the western extremity of Caferistan; and on a river of the same name, which comes from the N E quarter (in respect of the town), and from behind, that is, from the north of, Bijore: ‖ and flows from thence to the S W, or S S W, to join the waters of Penjeshehr, &c. from the north-west. Cabul is confined on the north, by the continuation of Hindoo-Kho; and on

* Kirkpatrick's MSS.

† Teerah is a small province, or district, lying between Peishawur and Cabul; and confined on the N and S by the river of Cabul, and by the southern ridge of snowy mountains. (Kirkp. MSS.)

‡ Vol. II. p. 199. The distance from Attock to the foot of Hindoo-Kho, by my construction, is 210 G. miles; equal to 147 Hindoostanny cofses, reduced to horizontal distance. Here we have a clear proof that the cofs, used by Abul Fazil, was of the common, or Hindoostanny kind, of 42 to a degree. It furnishes also a satisfactory proof of the accordance of Abul Fazil's distances, with those communicated by Capt. Kirkpatrick.

‖ Kirkpatrick's MSS.

the N E (as we have seen) by Caferistan, or Kuttore. Towards the south, or the quarter of Bungush, we are ignorant of its extent: but as its *greatest breadth* is implied, in the space between Kurrabagh and Chuganserai, it may be concluded that it cannot extend far beyond the river of Nughz.

The Ayin Acbaree is very full, in its description of the province of Cabul; and it appears by this, and every other account, to be a country highly diversified: being made up of mountains, covered with eternal snows; hills of moderate height, and easy ascent; rich plains, and stately forests; and these enlivened by innumerable streams of water. It produces every article necefsary to human life, together with the most delicate fruits and flowers. It is sometimes named Zabulistan, from Zabul, one of the names of Ghizni; which was the ancient capital of this country, and of which Candahar was then reckoned a part: although by the arrangement in the Ayin Acbaree, Cabul itself is reckoned a part of the soubah of Cashmere. Cabul, however, has since been regarded as a soubah of itself; and with evident propriety.

Cabul, as well as Candahar, together with some districts on the east of the Indus, are comprized within the extensive dominions of Timur Shah Abdalla (usually styled King of Candahar), which extend westward to the neighbourhood of the city of Tershish; including generally Cabul, Candahar, Paishawur, Ghizni, Gaur, Seistan (or Sigistan), and Korasan. This tract is not lefs than 800 B. miles in length, from east to west: but although we know not what the extent may be, breadthwise; yet there is little reason to suppose that it bears any proportion to the length. It does not differ much from the tract comprized within the ancient kingdom of Ghizni. Timur Shah's Indian subjects are chiefly Afghans; the rest, Persians and Tartars of almost every denomination. His government is said to be mild and equitable; with some degree of relaxation as to military discipline. This, in a government purely military, forbodes difsolution.

The city of Cabul, the present capital of Timur Shah, is situated near the foot of the Indian *Caucasus*, or *Hindoo-Kho*; and the proximity of this ridge, occasions the most rapid changes in the temperature of the atmosphere. Its situation is spoken of in terms of rapture by the Indian historians; it being no leſs romantic, than pleasant: enjoying a wholesome air, and having within its reach, the fruits and other products both of the temperate, and the torrid zone. In a political light, it is considered as the gate of India towards Tartary: as Candahar holds the same place, with respect to Persia.

It was found neceſsary to anticipate the subject of the roads and paſses, between Cabul and the Panjab country; in order to explain, with more effect, the march of Timur: and to this discussion (page 118, *et seq.*) we beg leave to refer the reader. It is there stated, that the country of Cabul is divided into two parts, by a ridge of snowy mountains, which extends from east to west, from the Indus to the neighbourhood of Ghizni. Also, that a doubt existed whether the ridge terminated *there*, or joined the mountains that are known to lie on the south of Candahar. By the course of the river of Ghizni, described in the Ayin Acbaree, and in the Turkish geography, quoted by D'Anville; it must force a paſsage through those mountains, supposing the continuity to exist.

Between the mountains of Hindoo-Kho, and those of Candahar, the country takes the form of an extensive valley, from Cabul to the borders of Korasan. Mr. Forster reports, that he croſsed no ridges of mountains, within this space: and the Ayin Acbaree, in describing the different roads that lead from Cabul to Turan (that is Transoxiana), mentions one, by way of Candahar and Korasan, which is "free from hills." *

It appears, that in the tract between Cabul and Candahar, the

* If this account be true, it destroys the supposition of a continuity of mountains, from the south of the Caspian sea, to India.

highest point of elevation of the country, is marked by the descent of the waters from it, in almost every direction. Our knowledge, respecting this particular, is, however, confined merely to a few leading facts. At Mooker, 42 G. miles west from Ghizni, the waters of the Turrung river, incline to the west; and the Hir, Heer, or Heernund, which iſsues from the south of the Bamian ridge (of Hindoo-Kho), runs to the S W, towards the lake of Durrah, or Zurrah, in Korasan. The river of Balk, one of the heads of the Jihon (or Oxus), iſsues from the north of the same mountains; and the waters of Cabul from the east. Those of Nughz, and Ghizni, *appear* to have their sources from the same quarter, also; but we have no positive information on this head. The Ayin Acbaree, Vol. II. p. 207, speaking of Ghizni, says, "a river runs from "*north* to *south*, and fertilizes all the cultivated lands." And M. D'Anville *(Eclairciſsemens Geographiques sur la Carte de l'Inde*, page 26) quotes the Turkish geography, compiled by Kiatibchelebi, to shew, that a river of the name of *Dilen*, rises beyond, that is, to the N, or N W, of Ghizni, and receives near Kerdiz (Gurdaiz, without doubt), another river named *Semil:* after which the confluent river takes the name of *Cow*, and pursuing its course towards Nagar (Nughz), receives, near that place, another river, which comes from the quarter of Candahar. The Emperor Baber, often speaks of a river in this quarter, by the name of Cow-mull: but Capt. Kirkpatrick, to whom we are indebted for this information, conceived that the river Cow-mull, joined the Indus *below* Chowpareh. At the same time, he concludes with certainty, that the river of Nughz, which also paſses by Bunnoo, joins the Indus at, or very near to, Deenkote. This is also the opinion of M. D'Anville; founded, probably, on the facts set forth by the Turkish geographer abovementioned *(Eclaircis.* p. 26). Here it is taken for granted, that the *Tsbebin-kot* of D'Anville, is meant for Deenkote. I think we have here, abundant authority for believing that the waters of Ghizni and of Gurdaiz, form the great river of

Bungush, which paſses by Nughz and Bunnoo, and discharges itself into the Indus, at Deenkote: and also that this river is the one named *Cow*, or *Cow-mull*, by the Oriental historians and geographers: but we are left in uncertainty concerning its sources; for the Emperor Baber's observations on the heads of the rivers, in the neighbourhood of Bamian, may, in the particular that relates to the Sinde, be understood to mean either the river of Cabul, or that of Nughz. He says, "the Sinde (that is, the Indus), iſsues "from the mountains of Bamian; where also are the springs of the "Hirnund, and of the double river of Balk and Condoz (meaning "the Jihon). We are aſsured that a person may drink, at Bamian, "in the same day, out of every one of these four rivers." No one can doubt the accuracy of the Emperor Baber's information, on this subject: and therefore we may with certainty conclude, that certain streams, which communicated with each of the four rivers abovementioned, iſsued from the neighbourhood of Bamian: but which of the two rivers it was that ran from thence into the Indus (or which was, in Baber's idea, the Indus itself), we are not told: whether the one that paſses by Cabul, or by Nughz. But the probabilities are, that the former was meant: because it is spoken of as a river of some bulk, at Cabul, and therefore must have a remote source: and because we are not certain that the Nughz river has a source so remote.

The Cabul river, as it is loosely named, throughout its course, has, neverthelefs, the proper name of Kameh, or Kamah, from the neighbourhood of Jalalabad, 60 or 70 miles below Cabul, downwards to Paishawur. At Jalalabad, it is navigable for *Jalebs*, or rafts of a particular construction; and as no embarkations of the hollow kind are in use,* it seems to prove that the navigation is interrupted by *rapids*; for there can be no doubt but that the

* History informs us, that some of the emperors have made voyages down the Kameh, on *Jalebs*: it is therefore fair to suppose, that no better kind of embarkations were to be had. For a description of these, see Mr. Gladwin's History of Jehanguire's Reign, p. 110.

body of water in the Kameh is sufficient to carry boats. It joins the Indus, as we have said before, in front of the city of Attock; where, although it must neceſsarily have received a vast acceſsion of water, on both sides, during its progreſs; yet Mr. Forster's journal reports that it is only a hundred yards wide, where he croſsed it; but I suspect an error in the number. It is said to receive no leſs than nine streams from the southern mountains alone:* How many it may receive on the north, we are not so certain of; or at what place they fall in: but it appears probable, from the authorities which I shall hereafter produce, that all the waters, that descend from the northern mountains, between the parallel of Cabul, and the Indus, fall into the Kameh, before it joins that river. We hear of several streams that iſsue from these mountains: the Doabeh, Dur, or Durbund, Gulbehar, and Penjshehr, are noticed in the marches of Prince Morad, or his officers: and all of them certainly run to the east. Baber says, that "the Chuganserai river comes from the NE quarter, and "joins the Baran river, in the district of KAMEH; when their "united streams take an easterly course." Further, we learn, from the same authority, that the rivers Alishung and Alunkar, which likewise spring from the mountains on the N E of Cabul, unite with the same Baran, below Munderar; which district appears to lie higher up, with respect to the course of the Baran, than Kameh does: and this last is known to lie on the north of the Cabul river, nearly opposite to Jalalabad. From which it appears, that ALL the rivers just mentioned, join in the district of Kameh; and then run eastward, or south-eastward. But it is not so clear, whether these confluent waters join the river of Cabul, above Paishawur, or whether they form a separate river, and paſs by Bijore and Sewad. I think the former is the most probable; and that the confluent river receives the name of *Kameh*, from the dis-

* Kirkpatrick's MSS.

trict in which the junction takes place; and then communicates it to the Cabul river, during the remainder of its course. Whatsoever be its course, it will be seen by a reference to the map, at page 65, that either of the springs between Bamian and Chuganserai, may paſs for the western head of the Indus; although the most remote of all, and the identical one meant by Baber, is probably the DOABEH, which springs from the west of Cabul.

By means of the history of the campaigns of the Emperor Baber, and of the generals of Acbar and Aurungzebe, in Bijore, Sewad, and the neighbouring provinces, much general knowledge respecting those countries, and the rivers that interſect them, is derived. Some faint light is also thrown on the latter subject, by the quotations of M. D'Anville, and M. Otter, from the Turkish geographer abovementioned; but it is, notwithstanding, still involved in some degree of obscurity. We have an account in the histories of the campaigns, of four distinct streams that take their course towards the Indus, and which appear to unite succeſsively with the river of Cabul, before it falls into the Indus. 1st, The river that paſses by the town of Bijore, 40 or 50 miles below the point, where the Baran and Chuganserai rivers are said to join (page 156); and it is *poſsible*, though by no means *probable*, that it may be a continuation of the confluent river. It is said to be only 70 yards in breadth, where the bridge was thrown acroſs it. 2d, The Penjekoreh river, apparently larger than the former; which it joins at the distance of two marches, to the south-east of the town of Bijore; and, in its way, separates the province of that name, on the west, from Sewad, on the east. 3d, The Chendoul river, apparently a leſser stream than either of the others; and to be regarded as a branch of the Bijore river. And, 4th, the Sewad river, the easternmost and largest of the whole. Baber croſsed it midway between the town of Bijore, and the paſs of the Indus, at Nilab: and as he croſsed both rivers, we have a very reasonable proof that the Sewad river (the *Suvat* of Otter, and D'Anville), is a distinct river from

the Sinde, or Indus: for had they been one and the same stream, Baber would, of course, after crofsing it the second time, have been on the same side of it, as before he first crofsed it; that is, on the west, or opposite side to the Panjab: whereas the history informs us, that after the second crofsing, at the distance of three marches from the first, he was on the eastern, or Panjab side of the Indus. In the course of another expedition, Baber came to the Sewad river, at a place above the city or town of Mashanagur, or Ashenagur, in two *long* marches from Bijore. We shall presently shew that Ashenagur, applied to the province, is another name for Sewad.

The Turkish geographer quoted by D'Anville, says, that the Penjekoreh river is joined by another, that comes from the mountains of *Kuber*, on the east; and that the *Hezaree* river (which is understood to be that of Cabul, or the Kameh), joins this confluent stream, a little farther down (*Eclaircis.* p. 24). This account appears to be plainly descriptive of the confluence of the Penjekoreh, and Sewad rivers (the latter of which is known to come from the quarter of KUTTORE, on the north-east, or north of Sewad; and may be the country intended by KUBER); and also of those waters with the river of Cabul; but what follows concerning the position of Ashenagur, is not so clear to me: for I conclude that it stands at, or near, the conflux of the Penjekoreh and Sewad rivers; and being only two marches from Bijore, the position assigned it in page 25 of the same book, must be erroneous:* for the point of junction of the Cabul river with the Indus, is six marches from Bijore.†

The information respecting the province of Ashenagur, in the

* As the book is very scarce, I quote the paſsage: "Ashnagur est une autre grande ville, "qui donne même son nom à une province particulière. Elle est située, selon le même "géographe, dans l'endroit où la rivière de Hezaré (qui est celle de Kabul) se joint avec "l'Indus.—Il est mention de Suvat, comme d'un canton du pays d'Ashnagur, dans le même "géographe Turque."

† Kirkp. MSS.

same page, is very interesting: for by that we learn, that Sewad (or *Suvat*, as it is there written) was part of the ancient province of Ashenagur; and it will be found to correspond with the situation of the country of the *Afsacani*, in which Alexander warred, on the west of the Indus.

Bijore, called also Bejour, and Bajour, is a geographical position, on which the right distribution of the space, between Cashmere and Cabul depends. We have seen that it lies at the distance of six of Baber's marches from the Indus, at the pafs of Nilab; near Attock. It also lies wide of the road leading from Paishawur to Cabul, because the road to it from Cabul, lay through Kameh: and because the province in which it is situated, and of which it is the capital, borders on the north of Paishawur. The Ayin Acbaree informs us (Vol. II. p. 194.), that "a desert, 30 cofes in length, "by 20 to 25 in breadth, adjoins to the Bijore province, and is con- "fined by the *mountains*, and by the rivers of Cabul, and Sinde." The extent of this desert marks the space, nearly, between Paishawur and Bijore: for the mountains of Lungerkote (Kirkp. MSS.), are said to be 20 cofes from the city of Paishawur; and they separate the provinces of Bijore and Sewad, from that of Paishawur. The breadth of the desert, may therefore be supposed to include the space between the city of Paishawur, and the mountains of Lungerkote: and the length of it will be equal in extent to the space included between the Indus, and the farthest extreme of Bijore, westwards: this province must, therefore, have between it, and the Kameh, a space equal to the breadth of the desert.

The space occupied by the provinces of Puckholi, Beneer, Sowhad, and Bijore, collectively, throws farther light on the position of Bijore town. These provinces lie in an east and west direction, between Cashmere, and Lumghan, the eastern frontier of Cabul; and their dimensions in the Ayin Acbaree (Vol. II. p. 192, *et seq.*) are as follow:

Puckholi,	-	length	35	cofses,	-	breadth	25
Beneer,	-	-	16	-	-	-	12
Sewad,	-	-	40	-	-	-	15
Bijore,	-	-	25	-	-	-	10
			116				62

The Kishengonga is said to be the eastern limit of Puckholi, in the same book; and its position is ascertained by the route of Jehanguire, mentioned in page 196 of this work. From that point, if we lay off half the sum of the two numbers collectively, which is 89 cofses, on a supposition that some of the provinces lie with their greatest length in one direction, and some in another; yet that extent of distance will reach within 5 cofses of Jalalabad; which is known to lie nearly in the centre of the Lumghanat, instead of the eastern extremity, as this would make it. Besides, Guznoorgul province (belonging to Caferistan) lies on the west of Bijore; and between it and the Chuganserai river, which forms the NE boundary of Cabul: therefore, on the whole, there can be little doubt but that the provinces abovementioned, lie with their greatest length, in a N and S direction: and when we consider that some of them have large rivers, whose courses are in that direction, for boundaries; it appears yet more probable: for experience shews, that provinces have commonly their greatest extent, in the direction that their principal rivers take; especially when those rivers are boundaries also. Here, it is unquestionable, from the application of the given dimensions, to the existing space.

The province of Bijore being only 10 cofses in breadth, leaves little room for error, in placing its capital, when the boundaries of the province are defined; which may be accomplished by the above *data*: for it has been shewn that Bijore lies on the north of Paishawur, and at the distance of 20 cofses, or thereabouts, beyond the Cabul river; and that the western extreme is about 30 cofses from

the Indus: and this position corresponds with the distance of 62 cofses, the breadth of the four provinces, collectively, from the Kishengonga to the western extreme of Bijore; and also leaves a space for the province of Guznoorgul, between its western limit, and the Chuganserai river: This then is the relative position of the body of the province; which is supposed to extend 25 cofses N and S; and 10 E and W: and the town of Bijore being six marches (see page 158) from Nilab or Attock, or about 66 G. miles; this distance laid off to the centre of the province, places the capital in latitude 34° 7′; 50 G. miles, N a little E from Paishawur; and the same distance, E a little N from Jalalabad.

This material point being adjusted, all the rest follow of course. Sewad, and Beneer (which last seems to be a dependency of Sewad), lie on the east of Bijore, being separated from it by the Penjekoreh river; and are bordered on the N by Kuttore, on the S by Paishawur; and on the E by Puckholi; the Indus forming the common boundary between them. In the Ayin Acbaree, the Indus is said to run through *the borders of Sewad* (Vol. II. p. 132), and in page 192, it is mentioned as one of the rivers of Puckholi, in common with the Kishengonga and Behut. We may therefore very safely conclude, that the Indus takes its general course *between* the provinces of Puckholi and Sewad; and the extent of the former being known, we are enabled to fix the general course of the Indus in this place.

Sewad and Bijore are exceedingly mountainous, and abound with paſses, and strong situations: so that their inhabitants have not only held themselves generally independent of the Mogul emperors, but have occasionally made very serious inroads into their territories.

The Yusuf-Zyes, a numerous tribe of Afghans, quitted (says Mahomed Cazim) their ancient habitations between Ghizni and Candahar, and after various unsuccesful attempts to obtain a settlement in Cabul (at the time when Mirza Ulug Beig, surnamed

Cabulee, ruled that kingdom), finally established themselves in Sewad and Bijore; which, at this period, were governed by a dynasty of princes styled SULTANI, who derived their lineage from Alexander the Great.* It will be remarked, in its place, that Bijore is certainly the *Bazira* of Alexander, and that the celebrated rock of *Aornus*, ought to be situated either in Bijore, Sewad, or the adjoining country of Kuttore: therefore, this, and the following information concerning the descendants of Alexander, or his followers; ought not to be rejected as fabulous: for it certainly obtained belief, not only from Mahomed Cazim, but from Abul Fazil, the author of the Ayin Acbaree; and from Soojan Rae also.† I shall not offer any apology for transcribing Capt. Kirkpatrick's sentiments on this subject; as his knowledge of the original authors whom he quotes, is so extensive and accurate.

" A circumstance serves to confirm your opinion respecting the " *Bazira* of Alexander.

" There is a certain tribe at this day, inhabiting modern Bijore " (or at least there was, not long ago), who pretend to be the de- " scendants of certain persons belonging to that conqueror's ar- " my; who, they say, were left there, when he paſsed through that " country. Both ABÛ FUZUL and SOOJAN RAE report this tradi- " tion, without any material variation. The latter, indeed, adds, " that these Europeans (if we may call them so), continued to pre- " serve that ascendancy over their neighbours, which their ances- " tors may be supposed to have poſseſsed, when they first settled " here. Now, although we should reject this pedigree, as false, " yet the bare claim to it argues a perfect conviction in the minds " of the natives (which they must have some sort of foundation " for), that Alexander not only subjected Bijore, but also trans- " ferred his conquests to some of his own countrymen. For what " ABÛ FUZUL has said on this subject, see page 194 of the 2d vol.

* Kirkpatrick's MSS. † Ibid.

" of the Ayun Akbari: where, by Sultan SECUNDER ZÛLKERMAIN " (which ought to have been printed ZÛL KERNINE),* is meant " ALEXANDER THE GREAT."

It will be proper also to transcribe the paſsage just alluded to. " The whole of this sircar (Bijore) consists of hills and wilds; and " is inhabited by the tribe of Yusuf-Zye. In the time of Mirza " ULUG BEIG, the tribe of Sultan, who aſsert themselves to be the " descendants of the daughter of Sultan Secunder Zûl Kermain, " came from Cabul, and poſsesed themselves of this country. " They say that Secunder left treasures in Cabul, under the care " of some of his relations; and some of their descendants, who " carry their genealogical table in their hands, now † dwell in " the mountainous parts."

It will be perceived that Mahomed Cazim, and Abul Fazil, differ in the chronology of this point of history: the one referring the migration of the Yusuf-Zyes, to the same point of time, which the other fixes, for the migration of the Sultani.

The Yusuf-Zyes poſseſs, in addition to Sewad, and Bijore, the tract situated between those provinces, and the rivers of Cabul and Indus; the greatest part of which is described as a desert in the Ayin Acbaree, but by Bernoulli, as a forest. On occasion of their infesting the communications between the Panjab and Cabul, in the time of Acbar, Zine Khan was sent to chastize them; which he appears to have done effectually. He over-ran their whole territory, and even penetrated to the borders of Cashgar; where he took the strong fort of Kushal, or Gushal, situated on a mountain, 17 marches north of Bijore. From the nature of the country, these marches are said to have been very short; and they might also have been very circuitous; so that we can form only a very general idea of the situation of Kushal, from them: but as the garrison retreated towards Badakshan, *over the river Chuganserai*,

* That is, the TWO-HORNED. † In the latter part of the 16th century.

we may collect, from the course of that river (page 151), that Kushal bears to the west of N from Bijore; and may probably be leſs than 70 G. miles from it. Nor ought we to be surprised, at finding Cashgar (or rather its dependencies) in this position; for the Ayin Acbaree mentions it, as lying on the north of Sewad and Bijore, &c. Munglore, the capital of Sewad, is said to be near a paſs, which *adjoins to Cashgar*. Vol. II. p. 193.

Aurungzebe also found it neceſsary to chastize the Yusuf-Zyes (about the year 1670); since which, the return of Nadir Shah in 1739, again brought them into notice. They appeared formidable, even to the Shah; but according to Abdul Kurrim, page 7, he reduced them to submiſsion: and if they really engaged to supply his army with 30,000 men, the tribe must have increased since the time of Acbar; when Bijore contained only 39,000, and Sewad 40,000 families. (Kirkp. MSS.)

Kuttore appears to be the general name of the tract bordering on the north of Sewad, Bijore, Puckholi, &c. from the N E frontier of Cabul, to Cashmere. It has also obtained from the Mahomedans, the name of CAFERISTAN, or Land of Infidels. It is claſsed (we have seen) as a dependency of Cashgar, by the people of Hindoostan; but seems to have been very little known to them. It occupies, as we have before observed, nearly the place of Ptolemy's *Comedi*; and answers to it in description, being entirely mountainous. The expedition of Timur to the mountains of Kuttore, is particularly described by Sherefeddin, and translated by M. Petis de la Croix: besides which, Capt. Kirkpatrick has communicated translations of his own, both of that, and of certain paſsages in other authors, descriptive of the country of Kuttore, and its inhabitants.

Timur proceeded from Anderab in Badakshan, to Kawuck, or Khâwick; the furthest, or most eastern, of the paſses leading through Hindoo-Kho, into the province of Cabul. In order to arrive at the fortreſs of Kuttore, he croſsed several ranges of high

mountains, rising one above another; some of them covered with snow: and the fortrefs is described as being near the foot of the furthest range; having a river of great depth and rapidity, paſsing close to its walls. It may be supposed that these ranges of mountains are the continuation of Hindoo-Kho, from Kawuck; and then Kuttore will lie to the south of that range: but the distance of it from Anderab, cannot easily be made out. Capt. Kirkpatrick's translation, allows 18 days from the time of Timur's departure from Kawuck, to his return thither, by a different route. From the history of his transactions, he might be in motion 12 days of the time; which allows 6 marches in distance: but the nature of the country would not admit of more than 40 to 45 G. miles of direct distance, for these marches, from Kawuck; and this last may be 60 from Anderab: whence, I suppose, Kuttore fort may be 100 to 105 G. miles to the E by S, or E S E, of Anderab; and about the same distance, in a N E direction, from Cabul. But this position, as the reader may perceive, has more of conjecture, than of authority, for its basis. The Kushal of Zine Khan, is not far from Kuttore, according to my supposition.

The author of the *Dil Kusha* (according to Capt. Kirkpatrick), describes the mountains of Kuttore as stretching from the borders of Cashmere to Cabul. Alishung and Alunkar, the districts alluded to, in page 151, were included in it, in the time of Baber; as Guznoorgul was, when the Ayin Acbaree was compiled: to which may be added, that the proximity of Kuttore, to Lumghan and Jalalabad, is presumed, from the circumstance of Acbar's sending off a detachment from the latter (when on his return from Cabul), to scour the skirts of the mountains of Kuttore. (Kirkpatrick's MSS.) The author of the Dil Kusha also says, "This "region (Kuttore) contains a great number of towns and villages "and is exceedingly populous. Its principal towns are Tow-"kul (written in another MS. Showkul), and Jourkul; those "being the residencies of its rulers. It abounds in fruits, such as

" grapes, apples, plumbs, &c. It likewise yields rice, wheat, " and other sorts of grain. The natives are exceedingly fond of " wine and hog's flesh; although their country is well stocked " with cows and goats. They have a distinct language, nothing " resembling that of any other people: and their arms consist of " the bow and arrow, the sabre, and the sling." Another author adds, " That the natives are, for the most part, idolaters; that " they are of a robust make, and that their complexion is a mix- " ture of red and white." Sherefeddin, Capt. Kirkpatrick observes, " says nearly the same thing."

We have here, a second instance of a distinct race of people in the same neighbourhood: for the Bijorians and Sewadians (as we have seen), border on Kuttore.

The Siahposhians (or Black Vests) bordered on the north of Kuttore; since Timur on his route from Anderab to Kuttore, sent off a detachment to the *left*, that is, to the N E (as he went himself to the E, or S E), and this detachment penetrated into their country.

On the south and south-west of the province of Cabul, our knowledge is very limited. The roads from Ghizni to Candahar, and from the latter to Moultan; are all the geographical lines that we poſsefs in that quarter. The latter is from a march of Dara Sheko; and from it we learn, that the mountains of Suhmandroog, occur, at about 4 marches from Candahar; but that the rest of the road is more smooth and even, than that leading to Cabul, from Attock. The mountains of Wulli, covered with snow, were left to the north; but our knowledge of the geography of this part, is much too scanty to allow us even to venture an opinion, on the general direction of the ridges of mountains: we learn, however, from the journal of Mr. Steele (1614), who went by the direct road (it would appear) from Moultan to Candahar; that a large tract of mountainous country lay in his way; and also a river of the name of Lucca, which is not heard of, in Dara Sheko's

route; and therefore, probably joins the Indus, to the N of Dara's route. The Indus required 92 boats, or pontoons, for its bridge, where Dara croſsed it; and the Moultan river 65: and the rivers were then low. It does not, however, follow, that the breadth of the rivers bore an exact proportion to the number of boats; but we may conclude that the Indus is the widest river of the two.

The boundary of Moultan on the west; and the tracts occupied by the Balloges (or Bulloaches), and the Abdalli tribe of Afghans, in the line of Dara's route, are taken from Capt. Kirkpatrick's MSS. From him also we learn, that Dara sent his heavy artillery, for the siege of Candahar, in boats, from Lahore to Kun, or Ken, on the Indus; whence they were transported by land by Seewee and Dehâoo, to Candahar.

Candahar, while the Persian and Mogul empires were severally undivided, was the frontier city and fortreſs of Hindoostan, towards Persia; and was esteemed the key of the western provinces of the latter; and not unfrequently changed masters. The Ayin Acbaree claſses, as belonging to Candahar, several provinces on the west of it, which unequivocally belong to Persia: but as the limits of the empire, varied with the proweſs and abilities of the different emperors, it may be concluded that Acbar extended them to the utmost.

The position of Ghizni, the ancient capital of the kingdom of the same name, is totally different from what M. D'Anville supposed; for he placed it in the N W extreme of Cabul: although it appears to be almost in the very heart of that province.

Ghizni is termed THE SECOND MEDINA; owing to the great number of illustrious persons, whose remains have been interred there. Wonderful stories are related concerning its extent and population, in ancient times: yet Baber expreſses his surprise at its having ever been pitched on, for the seat of any empire.*

Although this was the part of India, the first known to Euro-

* Kirkpatrick's MSS.

peans, yet at this day, we know lefs of it, than of most other parts: nor ought it to excite surprise; for the modern Europeans have visited India, on a very different errand than what Alexander did: ours being purely on the score of maritime trade, until the downfall of the Mogul empire, opened the way to the acquisition of territory: and that in the opposite corner of the empire. This may serve to explain the cause of the great deficiency of geographical materials, for the tract in question: notwithstanding the aids that the science has received, from the labours of gentlemen, whose afsistance I am proud to acknowledge.

I have generally availed myself of the laborious researches of M. D'Anville, to introduce several places, whose names he has identified on the authority of the Turkish geographer beforementioned, whose works I am unacquainted with. Those who wish for more particular information, may consult his map of Asia, published in 1751; as also his *Eclairciſsemens*,* which accompanied that, and the map of India; the first section of which, is particularly curious, and applies directly to this subject. His *Antiquité Geographique de l'Inde*, deserves attention likewise: though I confeſs I cannot follow Arrian in his *detail* of Alexander's marches, in the countries bordering on the west of the Indus, for want of such unequivocal marks, as are to be found on the east side of that river, in the courses and confluences of the Panjab rivers. However, by the aid of Capt. Kirkpatrick's communications, and of the Ayin Acbaree, several positions in the march of Alexander may be ascertained: in particular, the second volume of that elaborate compilation, under the heads of Cashmere and Cabul, gives the names, dimensions, and relative positions, of the subdivisions of those countries; of which I have availed myself, throughout the geographical construction. I suspect that Alexander never went so far to the north as the city of Cabul; and that, although

* This work is become very scarce, and might be reprinted, with emolument to the publisher.

his route is generally represented as very circuitous, and even traversing the country from one extreme to the other; yet I apprehend, on the contrary, that he made no considerable deviations from his intended line of march, from the foot of *Caucasus*, or *Hindoo-Kho*, to the Indus, near *Peucelaotis*; or Puckholi. I shall endeavour to trace his route generally, from the river COPHENES, that being the first point, according to my idea, that can be recognized. There seems indeed, to have been few doubts entertained, concerning the position of the *Paropamisan Alexandria*; which has been referred to Candahar, by M. D'Anville, and many other geographers: and, I confefs, I was decidedly of the same opinion, until Capt. Kirkpatrick's communications gave me a better idea of the position of Candahar, in respect of Hindoo-Kho (Alexander's Caucasus), and of both of these, in respect of Balk, Cabul, and Bamian: and finding that Candahar is at a great distance to the southward of that ridge,* whilst Alexandria is repeatedly said to lie at the southern foot of Caucasus, I ought according to the history, to look for it in some other position. That position, however, I have not been able to find: and the only facts that I can collect, towards enabling me to form any idea of the general position of *Alexandria*, are the following.

Alexander's route from the south coast of the Caspian sea, was through *Aria*, *Zaranga*, &c. to *Arachosia*; answering to Herat, Zarang, and Arokhage;† the latter of which lies to the south of Candahar. From Arachosia, he went into *the adjacent country of the Indians*; which answers, I conceive, to Cabul and Ghizni: for no district, lying west of the Ghiznian province, can well be clafsed amongst those of India. In his way from the Arachoti to the Indians, he went through deep snows; that is, I suppose, over

* Or rather the continuation of Hindoo-Kho, westward, under the name of GAUR: and this answers in position, to PAROPAMISUS.

† The names of places, in the map of the tract situated between the heads of the Ganges and Indus, and the Caspian sea, at the end of this Section, are given according to the ancient as well as the modern acceptation of them. The ancient names have a dash under them.

high mountains covered with snow; for the latitude is between 32 and 34 degrees: and there is no question, concerning the existence of high mountains on the south, and S E of Candahar. Taking for granted that mountains were paſsed over, we may suppose them to be a continuation of the heights of Suhmandroog, noticed in the march of Dara Sheko (page 166), and probably the *Parveti Mons* of Ptolemy.

From the country of the Indians, Alexander marched toward BACTRIA; in pursuit, or rather in quest of, Beſsus. Mount Caucasus lay in his way to Bactria: and this country, from the circumstances of name, and position, answers most perfectly to that of Balk. Now, in order to form a judgment concerning the site of Alexandria, we ought, I think, to inquire where the paſses, leading directly from the country of the Indians, to Bactria; over mount Caucasus, are situated: for in that line of direction ought Alexandria to lie, according to the history. The paſses then will be found between Ghourbund, and the quarter of Bamian; that is, on the N W and west of the city of Cabul; and much to the east of Candahar. The course of the river *Cophenes*, ought to afford some aſsistance in fixing Alexandria. It ran between Alexandria, and the first scene of the military operations of Alexander; and probably occurred pretty early in the march. In Alexander's arrangement of boundaries, the river *Cophenes* was the eastern limit of the province of *Paropamisus*; of which Alexandria was regarded as the capital: and that province, according to the ideas of Ptolemy, lay between those which the moderns name Korasan, and Cabul. I conclude, with some degree of confidence, that the river *Cow*, of the Turkish geography, and the *Cow-mull* of Baber (see page 154), which paſses by Nughz, and whose principal branches are the rivers of Ghizni and Gurdaiz; is the *Cophenes*, in question: and then we must look for Alexandria in the quarter of Bamian; but its particular situation, it is impoſsible to gueſs. At all events, the proximity of Alexandria to the northern moun-

tains, a fact which Arrian impreſses very strongly,* renders it an almost impoſsible case, that Alexandria and Candahar can be one and the same place. †

We shall take occaſion to mention, in its place, another fact respecting the Cophenes, which affords a strong presumptive proof, that it can be no other than the river of Nughz. It is unfortunate, that neither Mr. Forster's journal, nor Col. Popham's MS. give the particulars of any of the rivers on the road between Cabul and Candahar: the latter indeed notes no leſs than five streams that croſs it: but leaves us in uncertainty as to their bulk, names, and future course.

Leaving Alexandria, at the foot of Caucasus, Alexander came to the river *Cophenes*; which we have supposed to be the *Cow*, or *Cow-mull* river, that runs under the city of Nughz: and he must have paſsed it, in the higher part of its course; otherwise the snowy ridge that divides Lumghan from Bungush, would have lain between him, and Bazira: and no notice is taken of his croſsing so remarkable a chain of mountains. We may add, that only the uppermost part of the course of the Cow river, croſses the roads, leading from Hindoo-Kho, to the Panjab country. From the Cophenes river, Hephestion and Perdiccas, with a strong detachment, were sent into the country of *Peucelaotis* (according to Arrian; *Peucolaitis*, Strabo), near the Indus; where they were to make preparations for paſsing the army over. This country, in name and situation, agrees nearly with the modern Puckholi, called also *Pebkely*, lying on the north of Attock; and although the whole province, *now* lies on the east of the Indus, according to the state of our information; yet as we have said before, in

* In one place (Book IV.) he says that Alexandria was built amongst the *Paropamisæ*; and that Alexander in his way to it, from the Oxus, *croſsed* mount Caucasus. And in the preceding book; that Alexander *marched to mount Caucasus*, and built a city, which he named Alexandria.

† The ancient name of Candahar is said to be *Baliosa* (Kirkpatrick). Thus, the popular derivation of Candahar from Iskander, or Alexander, must be wrong. Besides, there is a place named Kandar, or Kondar, in the heart of the Deccan; where it never was pretended that Alexander came. See *Eclaircis.* page 19.

page 147, the striking resemblance in the name, and general situation; together with the probability of some variation in the limits, in the course of so many ages (and which is exemplified in those of Cashmere, in page 141; and of Cabul, in page 151); altogether makes me conclude that it is one and the same country; and that its capital stood near the western shore of the Indus; although it now stands at a very considerable distance, to the east of that river: for we find by the history, that the *Aſsaceni*, or *Aſsacani*, answering to Ashenagur (synonymous with Sewad); and *Bazira*, which answers to Bijore; adjoined to, or lay very near to *Peucelaotis*; as Sewad and Bijore do now to Puckholi.

Hephestion's stay at Peucelaotis must have been very considerable, previous to Alexander's arrival: as on occasion of the revolt of the prince of that country, the siege of his capital took up 30 days. Alexander himself marched from the banks of the Cophenes, against the *Aspii*, *Thyræi*, and *Arasaci*; nations, whose situations, and modern names, I am utterly ignorant of (unleſs Teerah should be meant by Thyra); but I conclude that they were inferior divisions of the modern Cabul, and situated between the rivers of Ghizni and Cabul, at the height of Irjab and Dooky. The nature of the country, described in the history, points to this neighbourhood; it was rough and mountainous, but not impracticable to cavalry: and beyond these mountains was the city of *Arigæus*, which might almost paſs for *Irjab*, in the route of Tamerlane, near the southern mountains. In his march to *Arigæus*, Alexander croſsed two rivers, the *Choe* and *Euaspla*; and defeating the Aspians in a pitched battle, near the latter, paſsed through the territories of the *Guræi*; and croſsed the river of the same name, with much difficulty, by reason of the depth and rapidity of its stream, and the nature of its bottom; which was composed of round slippery stones. He was at this time on his way to the country of the *Aſsaceni*, or *Aſsacani*; and this is a point, at which I shall pause, to endeavour to ascertain Alexander's position,

from the nature of the circumstances relating to it. The river *Gureus*, then, appears to have been the most considerable one that occurred, since Alexander paſsed the *Choe*; it was deep, but yet fordable; for had his army croſsed it in boats, they would either have been ignorant of the nature of its bottom; or, knowing it, they could not have regarded it as an obstacle. The description, as well as the position, suits the Kameh, or Cabul river, better than any other; as far as my information goes. The *Choe* and *Euaspla*, may be two, of the nine rivers of the Lumghanat. It is very difficult to judge of the length of Alexander's march from the Cophenes to the Gureus; but poſsibly it might be 100 road miles.

The country of the Aſsaceni, or Aſsacani, answers to Sewad (or Sowhad); Ashenagur being, as we have observed in page 158, the ancient name of Sewad; or rather Sewad was one of the subdivisions of Ashenagur. At present, Sewad includes the three provinces of Sewad *proper*, Bijore, and Beneer (Ayin Acbaree, Vol. II. p. 193). Such are the mutations, in the names and boundaries of provinces, and which are often accelerated by arbitrary arrangements in revenue books! Under the circumstances of the case, it was fortunate that the original name could be traced. *Massaga*,* the capital of the Aſsaceni, being taken by aſsault, Alexander summoned *Bazira*, the capital of the next adjoining territory: and here the modern district of *Bijore*, presents itself in a position that answers most unequivocally to that of *Bazira*; and the similarity of the names is no leſs striking. Of the position and extent of this province, we have spoken most fully in page 159. Its position becomes interesting, as it contains the famous mountain of *Aornus*, the taking of which was one of the most brilliant exploits of Alexander, in these parts. The Ayin Acbaree gives no intimation of its containing any such remarkable mountain; but describes it generally as a very strong country, and as

* Baber mentions a city of the name of *Masbangur*, situated on the river of Sewad. (Kirkp. MSS.)

having fastneſses, into which the inhabitants occasionally retreat. Arrian describes its base to be 18 or 20 miles* in circuit; of vast elevation, and acceſsible only by one narrow path, cut out in the rock. On the summit was a great extent of arable and pasture land, with springs of water: so that a garrison of 1000 men might subsist, without any extraneous aid. We may suppose it to be somewhat similar to Gwalior,† or Rotus Gur in Bahar. The Indus does not paſs near Aornus; because the district of Sowhad *proper*, lies between the Indus and Bijore, according to the Ayin Acbaree.

It appears that Alexander, after the taking of Bazira, and before he besieged Aornus (notwithstanding its proximity to the former) proceeded to the Indus, where he took poſseſsion of the city and fortreſs of Peucelaotis, and several small towns on, or near, that river: and as Hephæstion and Perdiccas make their appearance here, I conclude this to be the city spoken of before, as sustaining a siege of 30 days; which period might poſsibly expire about the time of Alexander's arrival: and the surrender might have been a consequence of it.

We have supposed the country of Peucelaotis to be the modern Puckholi, and the fortreſs and city in question, was probably the capital of it. A slight inspection of the map, at the end of this Section, will convey a clearer idea of the relative positions of the several provinces just mentioned, than any written description: and to that I shall beg leave to refer the reader.

If I understand the matter right, Alexander left the rock Aornus behind him, as I said before, when he proceeded to *Peucelaotis*, to receive its surrender: and afterwards marched back again (that is, to the N or N W) to invest the rock; taking the city of *Embolima*, which stood near it, in his way. And after the taking of Aornus, he made a second expedition into the country of the Aſsacani,

* Reckoning ten stades to a mile. † See the Index, article Gwalior.

situated between Bazira and Peucelaotis. His errand among the Aſsacani (the people of Ashenagur), this second time, was to get poſſeſsion of some elephants, which were said to be sent thither, to prevent their falling into his hands. It was doubtleſs an object to him, to be provided with a sufficient number of elephants, in order to oppose, with a prospect of succeſs, those of his enemies, when he should arrive on the east side of the Indus. And although Alexander might, from his superior knowledge of discipline, despise the attacks of those animals, as every accomplished general in every age has done; yet from an equal degree of knowledge of the human mind, he might conclude that his soldiers in general, would feel themselves poſſeſsed of more confidence, when, in addition to their ordinary means of attack, they could also employ that, which appeared the most formidable in the hands of their enemies. The elephants were at last found, in the pastures near the Indus, and sent off by land to the grand army; which we may suppose to be on their march, towards the bridge. He in the mean time, poſsibly tired of marching; or for the sake of novelty, wishing to embark on the Indus; caused trees to be felled, with which having constructed boats (according to Arrian), he sailed down the stream to the bridge. Poſsibly he made some rafts, which might be fully equal to his wants; but it is difficult to conceive, by those who are acquainted with the nature of constructing any kind of boats, that he either waited to build them, or that he carried with him the requisites for their equipment, on so sudden an emergency.

I have before (page 121) supposed Attock to be the place where Alexander croſsed the Indus: and over and above the reasons there aſsigned for it, I will now add another; which is, that after he came to the bridge (which was completed before his arrival), he made an excursion by land, into the country adjacent to the western bank of the Indus, to view the city of *Nysa* (supposed by D'Anville to be Nughz, or Nagaz, the *Nagara*, or *Dyonysiopolis*, of Ptolemy); and he is then said to have entered the country, that

lay between the two rivers, Cophenes and Indus. We have before taken it for granted (page 170), that the Cophenes is the river that runs by Nughz, and falls into the Indus, 30 or 35 miles below the city of Attock; and as the river of Cabul joins the Indus in front of the city of Attock, it is clear that until he came opposite to that city, he could not be between the Cophenes and Indus. And if it be said that the Cabul river, was the Cophenes, he had all along been between the Cophenes and the Indus; and Arrian's words could have no meaning. But it is probable, on every account, that Attock was the crofsing-place: there the mountainous country from the north-east terminates, and the plains of the Panjab begin; a circumstance highly favourable to his future plan of penetrating into India, and no lefs so to the construction of his bridge; which was no easy matter to accomplish, acrofs a river so wide and so rapid as the Indus; but which was lefs difficult in a level country, than in a mountainous one. The bridge was undoubtedly made of boats, as Tamerlane's was, in 1398: but Tamerlane crofsed at a season when the river was (comparatively) low; Alexander, after it was considerably swoln, with the periodical rains.

By Alexander's sending off Hephestion from the Cophenes, to provide the means of pafsing the Indus in the country of *Peucelaotis* (Puckholi), it would appear that he had an intention of crofsing it higher up than he afterwards did: and it was natural enough, before he had learnt from Hephestion that the situation was in every respect unfavourable.

I return from this long digrefsion concerning Alexander, to the account of the modern geography of the Indus, and the countries bordering on it, in the lower part of its course. I am convinced, that the more our knowledge of the particular geography of the countries, on both sides of the upper parts of the Indus, increases; the clearer will be our ideas of Alexander's marches. The commentaries of the Emperor Baber, quoted in the Ayin Acbaree,

have already proved a fruitful source of information; particularly in the province of Cabul, and its vicinity: and, I trust, that the spirit of inquiry, which has gone forth, in the countries where the events themselves were produced; will keep pace with the spirit of curiosity, which has been excited concerning them, in our own.

Of the INDUS, *and its principal Branches, below* MOULTAN; *with some Particulars relating to* SINDY.

THE common boundary of Moultan and Candahar, in the line between the capitals of those countries, is about 60 G. miles beyond the western bank of the Indus: as appears by the march of Dara Sheko. Our researches have scarcely penetrated into this quarter; of course we are unable to enlarge the reader's ideas concerning it: but it seems as if the country, at no great distance from the west of the Indus, partook of the nature of the adjoining province of Makran (the *Gedrosia* of Alexander), and was little better than a desert.

The best information, and which contains some very curious particulars, respecting the country of Sindy, and the river Indus; was most obligingly communicated, by a person of character and great respectability, who resided some time in that country, in the service of the East-India Company: and this shall be detailed, after the insertion of some particulars, that ought neceſsarily to precede it.

The general course of the Indus, from Attock to the delta, is taken from M. D'Anville's map of Asia; as I know of no better authority. The towns on its banks, are taken chiefly from the miſsionary's itinerary, before mentioned: as is also the point of conflux of the Setlege and Indus. The latitude of Behker, is given

at 27° 12′ in this itinerary; and its distance from Moultan being 106¾ royal coſes, or about 215 G. miles, in the tables; this will agree nearly to the position of Moultan, in page 91. The Ayin Acbaree says, that Behker is the ancient Mansurah. Finding Hajykan mentioned in the Ayin Acbaree, as one of the districts belonging to Sindy; and it being very certain, that a large province of the same name, lies on the west of the Indus, opposite to Moultan; I can no otherwise reconcile the two accounts, than by supposing that Hajykan extends southward, along the Indus, until it meets the border of Sindy; and that a small part of it was subject to Sindy. In this case, the district of Behker must be confined chiefly to the east side of the Indus. No part of Hajykan, is reckoned to belong, either to Moultan, or Candahar, in the Ayin Acbaree. The miſsionary's itinerary (1662) mentions the Balloges, as the then poſseſsors of Hajykan: and we have supposed that the *Oxycani* are intended for the inhabitants of the same country, by the historians of Alexander, in page 129.

Moultan is nearly at the same distance from the sea, as Allahabad; that is, from 800 to 850 B. miles, by the course of the river: and the miſsionary's party were 21 days in dropping down with the stream, in the months of October and November; when the strength of the land floods was abated.

The Indus, and its branches, admit of an uninterrupted navigation, from Tatta, the capital of Sindy, to Moultan, and Lahore, for veſsels of near 200 tons; and a very extensive trade was carried on between those places, respectively, in the time of Aurungzebe: but, at present, very little of this trade remains, owing to a bad government in Sindy; and probably to the hostile or rapacious disposition of the Seiks; the present poſseſsors of the countries of Moultan and Lahore. Capt. Hamilton says, that boats came from Lahore to Tatta, in 12 days. Had Ferose's canal been completed, there would have been a continued inland navigation, from Tatta to Bengal, and Aſsam. (See page 75.)

The geographical position of Tatta, and those of the principal mouths of the Indus, depend on that of Cape Monze, as set forth in page 37 of this Memoir; or rather as it was meant to be; for the latitude of this cape, should have been 24° 55′, instead of 24° 45′. The mouth of Ritchel river, taken at 24° 14′; and that of Larry-Bunder, which was the principal channel of the Indus, during the last century, and early in the present one, at 24° 44′; are respectively within one or two minutes of the latitudes assigned them: the first, by an observation of Capt. Scott (which was 24° 12′); and the latter by the East-India Pilot.

The city of Tatta, the capital of the province of Sindy, and supposed to be on, or near the site of the *Pattala** of the ancients, is situated, according to the idea of the gentleman who resided there, and whose observations have proved of such singular use, about 38 G. miles to the north of Ritchel, and 50 to the east of it: so that it ought to be in lat. 24° 50′, lon. 67° 37′; and about 125 miles from the sea, by the course of the river.† According to M. Thevenot, it is three days journey from Larry-Bunder town; which, according to Capt. Hamilton, is five or six leagues from the sea. M. Thevenot's three days journey may be taken at 54 G. miles of horizontal distance; and the whole distance of Tatta, from the mouth of Larry-Bunder river, at about 68 G. miles: and this does not disagree with the account given above.

According to a MS. itinerary (kept by N. Whittington, no date

* It is impossible to fix the exact site of Pattala, because there are properly *two deltas*, a superior, and an inferior one; exclusive of the many islands formed by the Indus, when it approaches the sea. Tatta is near the head of the *inferior* delta; and the ancient accounts mention only one great delta, having Pattala at the upper angle of it. In Ptolemy's map (Asiæ, Tab. XX.), Pattala is placed very far below the place where the Indus begins to separate into branches.

† These are the particulars: From Ritchel to Shahbunder, about 40 miles by the course of the river, the bearing, much eastwardly. Thence to Aurungabunder, 25 more (but by land only 10 or 12), the course somewhat more northwardly. Thence to Tatta, 60 miles, N N E, or N E by N. The windings of the river are supposed to reduce the distance, on a straight line, to 63 G. miles. The latitude of Tatta, is supposed to be something more than 24° 40′: the construction, according to these *data*, makes it 24° 50′.

to it), Tatta is about 180 coſses from Radimpour on the Puddar river: and 228 from Amedabad, paſsing through Radimpour. This last town is placed in the map, chiefly on the authority of a MS. map of Guzerat (of which more will be said hereafter); and 180 coſses, laid off from it, would place Tatta about 22 G. miles further to the west, than the position aſsigned it, above; provided that the general direction of the road, was straight; but it appears by the ideas of Jansen and Blaeu, who have severally described this road, that it bends greatly to the south; and therefore will accord very well with the above *data:* and it may be concluded, on the whole, that the longitudes of Tatta and of Cape Monze, are not far from the truth. The route in question, goes by the village of Negar-Parkar, and by the town of Nuraquimire; and through part of the territory of Cutch: it also croſses the great sandy desert.

It is not to be expected that any particular account of the number and positions of the several branches and mouths of the Indus, should exist, unleſs a survey of them had previously been made. All the information that I have been able to obtain on the subject, respects three of them only; and is as follows. About 170 miles from the sea, by the course of the river, the Indus divides into two branches; of which the westernmost is by much the largest. This branch, after a course of about 50 miles, to the S W, divides into two more; the smallest of which runs on a W S W course, to Larry-Bunder, and Darraway: and the largest, taking the name of the Ritchel river, runs on a more southwardly course to the town or village of Ritchel, on the sea coast. (Tatta is situated within this inferior delta, and about five miles below the upper angle of it.) The third branch remains to be mentioned, and is that which bounds the eastern side of the superior delta; separating, as is said above, at about 170 miles from the sea. It is smaller than the Ritchel river, but larger than that of Larry-Bunder; and by cir-

cumstances, and by report, it opens into the mouth of the gulf of Cutch, nearly opposite to Jigat Point: its course being somewhat to the eastward of south.

From these *data*, together with the aid of the charts of the coast, published by Mr. Dalrymple, it may be collected, that the delta of the Indus is about 150 British miles in length, along the sea coast; and about 115 in depth, from the place of separation of the superior branches of the river, to the most prominent point of the sea coast. Arrian (after Nearchus) reckons the first distance 1800* stadia; and Pliny 220 Roman miles: that is, he reckoned about eight of those stades to a mile.

The lower part of this delta is intersected by rivers and creeks, in almost every direction, like the delta of the Ganges: but, unlike that, it has no trees on it; the dry parts being covered with brushwood; and the remainder, by much the greatest part, being noisome swamps, or muddy lakes. A minaret, at the mouth of Ritchel river, serves for a mark for the road; which, from the flatneſs and sameneſs of the appearance of the coast, could not otherwise be discriminated. The upper part of the delta is well cultivated, and yields abundance of rice.†

From the ideas generally entertained concerning the nature, and treatment of camels, it would not be expected, that this delta; and especially that part of it, nearest to the sea; should be set apart for the breeding of those animals. It is, however, the case; and the tender parts of the brushwood, serve them for fodder.

It is a remarkable circumstance that the tide should not be visible in this river, at a greater distance than 60 or 65 miles from the sea. The *bores* are high and dangerous in the mouths of the river. (See the Introduction, page xxiv.)

The breadth of the Ritchel branch is estimated at one mile, just

* It appears from Strabo, that Aristobulus allowed only 1000 stadia for the basis of the delta.

† The Ayin Acbaree says, that the principal food of the inhabitants of Sindy, is fish and rice.

above the tide; and at Tatta, at only half a mile.* It is certain that the Indus is very considerably less than the Ganges. The velocity of its current is estimated at four miles *per* hour, in the dry season; which I should suppose to be over-rated, unless the declivity be much more than I have an idea of: though indeed, the short course of the tide, upwards, seems to require some such cause.

The province of Sindy, in many particulars of soil and climate, and in the general appearance of its surface, resembles Egypt: the lower part of it being composed of rich vegetable mould, and extended into a wide delta; while the upper part, is a narrow slip of country, confined on the Persian side by a ridge, or ridges of mountains, and on the other by a sandy desert; the river Indus, equal at least to the Nile, winding through the midst of this level valley, and annually overflowing it. During great part of the S W monsoon, or at least in the months of July, August, and part of September (which is the rainy season in most other parts of India), the atmosphere is here generally clouded; but no rain falls, except very near to the sea. Indeed very few showers fall during the whole year. Capt. Hamilton says, that when he visited Tatta, no rain had fallen for three years before. Owing to this, and to the neighbourhood of the sandy deserts, which bound it on the east; and are not far removed from it, on the north-west; the heats are so violent, and the winds from those quarters so pernicious, that the houses are contrived so as to be occasionally ventilated, by means of apertures on the tops of them, resembling the funnels of small chimnies. When the hot winds prevail, the windows are closely shut, by which the hottest part of the current of air, (that nearest the surface, of course) is excluded: and a cooler part, because more elevated, descends into the house, through the funnels. By this means also, vast clouds of dust are excluded, the entry of

* Hamilton reckoned it a mile broad, in 1699; and says it was six fathom deep, and that the inundations are in April, May, and June.

which alone would be sufficient to render the houses uninhabitable. The roofs are composed of thick layers of earth, instead of terraces. Few countries are more unwholesome to European constitutions; particularly the lower part of the delta.

Sindy extends along the course of the Indus from its *embouchure*, to Behker, or Bhakor, on the frontiers of Moultan; and may be reckoned at least 300 B. miles in length, that way. Its breadth is very irregular: it may be about 160 miles in the widest part. On the N E, lie the territories of the Seiks; and on the north, those of the King of Candahar; on the west is Makran,* a province of Persia, whose prince is tributary to the King of Candahar. A sandy desert bounds Sindy on the east, and extends the whole way from the territory of Cutch, to the confines of Moultan; being near 550 B. miles in length, and from 100 to 150 wide. P. Wendell, in his account of the Rajpoots' country (or Rajpootana) says, that the country begins to grow sandy, immediately on the west of Agimere: so that the desert must be exceedingly wide in that part. This is the sandy desert mentioned by Herodotus, as the eastern boundary of India. See page xxii of the Introduction. The fort of Ammercot, the retreat of the Emperor Humaioon, and the birth place of his son Acbar (page lvii) is situated within this desert. In the Ayin Acbaree, it is clafsed as belonging to the Nufserpour division, of the province of Sindy: Ferishta reckons it about 100 cofses from Tatta. It may reasonably be supposed, that this desert contains many habitable tracts, or islands, within it; like the Oases† of the Lybian deserts.

The city of Tatta, the position of which we have described above, was, in the last century, very extensive and populous, and was a place of great trade; pofsefsing manufactures of silk, carmania wool, and cotton: and was also celebrated for its cabinet ware.

* Makran, or Mocran, we have supposed to be the ancient Gedrosia. One of its modern names is *Kidge*, or *Kedge*, and is often prefixed to the other, as *Kidge-Makran*. If *Kidge*, or *Kedge*, was in use anciently, it is likely to have given rise to the name *Gedrosia*.

† See Savary's Letters on Egypt.

Little of these now remain; and the limits of the city are very much circumscribed. On the shores of the Indus, above the delta, considerable quantities of saltpetre are made: and within the hilly tract, which commences about three miles on the N W of Tatta, are found mines of iron, and salt. The ruins of a city, supposed to be Braminabad, lie within four miles of Tatta.

The reader will be pleased to recollect, that Nadir Shah, in 1739, obtained from the Great Mogul, Mahomed Shah, a cession of the province of Sindy, as well as the rest of the Indian provinces, lying on the west of the Indus: and he even visited Tatta. Abdalla, when he seized on the provinces, which compose his present empire, retained the sovereignty of Sindy also: and the prince of this province, is, accordingly, tributary to the present King of Candahar, Timur Shah.* The prince is a Mahomedan, and of Abyssinian extraction: his usual place of residence is at the fort of Hydrabad, situated on the Indus, not far above the head of the delta; and in the neighbourhood of the city of Nusserpour. The Hindoos, who were the original inhabitants of Sindy, and were reckoned to outnumber the Mahomedans, in the proportion of 10 to 1, in Capt. Hamilton's time, are treated with great rigour by their Mahomedan governors; and are not permitted to erect any pagodas, or other places of worship: and this severity drives vast numbers of them into other countries.

The gentleman to whom I am indebted, for the chief part of my information, on the present subject, went up the Indus as far as the city of Behker, which is about two-thirds of the way to Moultan. He observed the moveable towns or villages on the banks of the river (noticed by Nearchus, and the Ayin Acbaree: see Introduction page xxx). Some of these are the habitations of fishermen, and others of graziers: and they are constantly changing

* Mr. Frazer, in his account of Nadir Shah, gives a copy of this partition treaty, by which the *Nulla Sunkra*, or Sunkra river, was to be the common boundary between Hindoostan and the Persian provinces, near the mouth of the Indus. It may thence be inferred, that the eastern branch of the Indus is named *Sunkra*.

their positions, like a camp. Few rivers abound more with fish, than the Indus does; and among these, are some very delicious sorts.

Among the various tribes, that inhabit the hilly tracts, bordering on the western side of the Indus; there is, according to my friend's account, one of the name of *Nomurdy*. They are of the Mahomedan religion; are freebooters, and very troublesome to the villagers, and travellers. The Ayin Acbaree also takes particular notice of this tribe; and states its strength to be 7000 infantry, and 300 horsemen (about the year 1560). This being a part of the tract named INDO-SCYTHIA by the ancients, a doubt arises, whether they may not be the descendants of the Scythian NOMADES; if the Scythians on the borders of mount Imaus, did really call themselves by that name; and that it was not a term applied to them by the Greeks alone.* It may also be a question, whether the graziers abovementioned, may not have derived their custom of moving their habitations, from Scythian ancestors: for the custom, as far as I know, does not prevail in any other part of India.

Cutch, is a territory of considerable extent, situated on the south-east of Sindy; the eastern branch of the Indus separating the two countries. It extends along the northern coast of the gulf of Cutch, and is separated from Guzerat, by the Puddar river, or one of its branches. The present capital, and residence of its rajah, is Boodge-boodge; and appears to be the place named Booz, in a MS. map of Guzerat (communicated by my friend Mr. Dal-

* The following paſsage occurs in M. D'Anville's *Eclairciſsemens Géographiques sur la Carte de l'Inde*, p. 42. "On ignore le temps auquel les Scythes sont venus occuper le Sindi. Dans le Périple de la mer Erythrée,* la ville de Minnagara, la même que Mansora,† est qualifiée de capitale de la Scythie. Denys Périegete dit, que les Scythes méridionaux, habitent sur le fleuve Indus. Eustathe les nomme Indo-Scythes: et ce que Ptolémée appelle Indo-Scythie, remonte le long de l'Indus jusqu'au fleuve Coas.‡

* The Arabian sea, or sea of Omman.

† Bhakor, or Behker, is the same with the ancient Mansora—Ayin Acbaree.

‡ That which runs by Nughur, and falls into the Indus a considerable distance below Attock: and which, according to my idea, is the river Cow.

rymple, and, I believe, brought from India by Governor Hornby*), where it is placed about 34 G. miles to the eastward, or E S E of the eastern branch of the Indus. Cutch is composed chiefly of hills, woods, and sandy wilds; and we are utterly ignorant of any particulars, relating to the interior part of it. The mouths of several rivers appear in the map of its coast: and the ancient maps describe the Puddar river, as discharging itself into the gulf of Cutch, through these openings. It is posible that the river formed by the Caggar, and other streams, may discharge itself by one or more of these openings; unlefs it loses itself in the sands of the desert, which borders on the north of Cutch.

On the south coast of the gulf of Cutch, is a district inhabited by a piratical tribe, named *Sangarians*, who cruize for merchant ships, as far to the west as the entrance of the gulf of Persia. The capital of this state, is Noanagur; Bate (or Bait), and Aramroy, are its principal ports. The Ayin Acbaree takes notice of the founding of Noanagur, by a rajah who was driven out of Cutch, about 280 years ago: and says that the territory in which it is situated, is named *Little Cutch*. No mention is made of *Sangarians*, in the same book: nor of any piracies being committed by the people of Noanagur.

Nearchus names certain parts of the country between the mouth of the Indus and the river Arabius, *Sangada* and *Saranga*; but

* This map, which has the appearance of greater accuracy in the outline, and certainly contains more matter within it, than any other map of the tract, it is meant to represent; was drawn by a native of Cambay, a Bramin of uncommon genius and knowledge, named SADANUND. This information was given me by Sir Charles Malet, Resident at the Mahratta court of Poonah (who first suggested the idea of drawing the map); and who accompanied a very polite letter to me on the occasion, with a copy of the map in question, made by the author. By means of the same communication, as well as by the nature of the presents just made by the EAST-INDIA COMPANY, to MADAROW, the young Paishwah of the Mahrattas; I learn that this young prince, has a great turn for geographical studies: whence we may expect a great addition of geographical matter, collected on the spot, by English gentlemen, properly qualified for such pursuits; and *protected* by a patron of science, rather than *tolerated* by the operation of political influence. Under these auspices, Capt. Reynolds, of the Bombay establishment, who has already distinguished himself as an able, and no lefs enterprizing geographer, was tracing some capital lines across the Deccan and Peninsula.

Modarow, the present Paishwah of the Mahrattas, is the person mentioned in pages lxxxvi, and lxxxviii, of the Introduction.

the tract was too confined, to be the abode of a *nation*. M. D'Anville supposes that the country of *Sangada*,† was the same with the modern *Sangara*: if so, the Sangarians must first have removed from the western, to the eastern side, of the Indus; and afterwards must also have crofsed the gulf of Cutch. The latter fact, indeed, seems verified by the Ayin Acbaree.

It is worthy of remark, how exactly the position and description of the haven, named by Nearchus, the *port of Alexander*; and which had an island near it, named *Crocola*; agrees with that of *Crotchey*: and proves incontestibly, by the circumstance of the proximity of the mountains to the sea coast, when the fleet had advanced only 150 stadia, from the mouth of the Indus; that Nearchus sailed out of the western branch of that river. However, one might conclude, from Arrian's account of Alexander's voyage, down the two branches below Pattala, that he fixed on the easternmost branch, for Nearchus's fleet to proceed through, to the ocean; as Arrian calls it the *left* branch: but the circumstance of Alexander's landing, with a *party of horse*, and proceeding three days along the coast, in the direction that his fleet was to sail; that is, westward; overthrows such a supposition entirely: for no one will suppose that he chose to march a party of horse, three days, along the coast of the delta; where he must have been continually interrupted, by deep rivers and creeks.

Account of the MAP *of the Countries, lying between the Heads of the* INDIAN *Rivers, and the* CASPIAN SEA.

THE route of Mr. Forster from Candahar to the Caspian sea, throws considerable light on the geography of the intervening

† Eclaircifsemens, page 42.

tract: as well as on other geographical materials, that were before involved in some degree of obscurity. As I have said, in another place, the discuſsion of the geography on the west of Cabul, does not belong so properly to the subject of India, as of Persia: and I shall therefore, at present, content myself with a few general observations, on the small map of the tract, lying between the heads of the Indian rivers, and the southern part of the Caspian sea: for having so often had occasion to mention the countries of Persia and Tartary, contiguous to the north-west parts of India; it will be for the reader's convenience to have a small map of those parts, inserted in this work; by which the relative positions of the frontier provinces of both countries, will be shewn, and the heads of the Indus, Ganges, and Oxus, brought into one point of view. It will also serve to convey an idea of the route pursued by Mr. Forster, from the banks of the Ganges, to the Caspian sea; and which has never been travelled by any European, in modern times: at least no account of it, is to be found on public record.

Between Candahar and Meschid-Sirr, on the south coast of the Caspian sea, Mr. Forster's route lay in a pretty straight line through Herat, Tershish, and Bistam; and this circumstance is favourable to the design of using his scale of computed farsangs, through that space. He estimates this measure roundly at two coſses, or about $3\frac{1}{4}$ British miles: but by his whole number of farsangs between Candahar and Meschid-Sirr, his standard of the farsang is calculated too high by about a seventh part: for it will be made to appear, when we take up the subject of the Persian geography, that it will require $23\frac{3}{4}$ of his farsangs to make a degree of a great circle; allowing the inflexions of the roads. With this scale, I have compared several of the intermediate places, in M. D'Anville's map of Asia; many of which I have ventured to alter: for it is probable that M. D'Anville might not have been poſsesed of an itinerary, so accurate as Mr. Forster's. Between Candahar and Gimmock, Mr. Forster estimates the bearing, at

W, and W by N; and the short distance between the latter, and Herat, N. No reason is aſsigned for the sudden change of course. From Herat to Bistam, the course was W by N; and the remainder of the way, W; W by N; and N W. All these bearings appear to be tolerably accurate.

This gentleman furnishes us with new ideas respecting the bearing of the chain of mountains, that is commonly supposed to penetrate Asia from west to east, under various names: or rather, he brings us back to the ideas, left us by the ancients. It is unquestionable, that the Greeks and Romans knew more of the particular geography of Persia, than the *modern Europeans* do: although the parts that are known to us, may be arranged with more geometrical precision. This chain (anciently named *Taurus)*, which rises in leſser Asia, and runs eastward through Armenia; and from thence deviating to the S E, shuts up the south coast of the Caspian sea; was continued by Ptolemy, under the names of *Coronus*, *Saripbi*, and *Paropamisus*: dividing Hyrcania and Tapuri, from Parthia; Margiana from Aria; and Bactria from the province of Paropamisus (or, according to modern geography, dividing Mazanderan, or Taberistan, from Cumis; the countries of Dahistan, Corcan, and Karasm, from Korasan; Balk, and Gaur, from Sigistan, or Seistan); and finally was made to join that ridge, which, under the name of *Indian Caucasus*, divided India from Bactria; and afterwards took the names of *Imaus* and *Emodus*; separating India from Scythia. It is not known to the moderns what course this chain takes, after it leaves the neighbourhood of the Caspian sea: or whether it does in reality join the Indian Caucasus: but the probability of it is strong, although it is not after the manner M. D'Anville supposed: for he gives it an E S E direction from the Caspian, and makes it paſs on the south of Herat. But had this been the case, Mr. Forster must have croſsed it in his way from Candahar; instead of which, he croſsed no mountains until he came within 100 miles of the Caspian sea; so that he left the

continuation of the Indian Caucasus (if such there be) on his right; or to the northward; and I really believe that the ridge does exist, nearly under the form described by Ptolemy; for the rivers crofsed by Mr. Forster, had all a southerly course; proving that the high land lay to the north, although out of sight: therefore the connexion between the Caspian mountains, and the Indian Caucasus, if such exists, must be by the north of Korasan.

There is no neceſsity for supposing that this chain should be *exceedingly lofty* in every part: the *existence* of it, alone, is contended for. Ptolemy makes a distinction between the height of Caucasus, and that of the continuation of it, eastward, under the name of Imaus; this latter being, by far, the highest: and the point of commencement of the change of name, and elevation (which last is described in words, as well as in the topography, *Asiæ*, Tab. VII. and IX.), answers to the western part of Kuttore, and is nearly opposite to the head of the *Suastus* river (*qu.* Sewad?) The ridge of mountains (which he names the *proper* Caucasus) the next in order to the Imaus, westward; occupies the place of Hindoo-Kho, as it is described in page 150: and moreover, confines the country of the *Lambatæ* on the south; (*qu.* Lumghan?) and this is succeeded in the same order, by Paropamisus, which answers to the mountains of Gaur, on the N, and N W of Candahar. As for the ridge that Mr. Forster crofsed, near the Caspian sea, it had a north and south direction; and answers to the mountains *Masdoramus* of Ptolemy, which shut up the eastern side of *Parthia proper*, situated on the S E of the Caspian. The modern name of this ridge is *Kana-hoody*; and Mr. Forster remarks, that the elevation of it is far greater on the west, than on the east: so that the lands of Korasan, are, in general, more elevated than those towards Ispahan. The Kana-hoody mountains are those which M. D'Anville has extended to Herat and Cabul; but we find their course to be quite different; but how far they extend to the south, or S E, is still a question.

I confeſs it was a matter of surprise to me, that there should be no mountains, between the province of Cabul, and Tershish, in the route paſsed by Mr. Forster: he describes nothing but scattering hills, where the maps usually represent lofty chains of mountains. Throughout his whole route from Candahar to the Caspian sea, he croſsed no stream, that was too deep to be forded, although the journey lasted from the beginning of August, to the latter end of January.

I have introduced Alexander's march after Beſsus, &c. in order to render the map more complete. We may trace the ancient *Tapuri*, in Taberistan; *Dabe*, in Dahistan; *Arachosia*, in Arokhage; and *Aria*, in Herat, or Harat. Cau-casus, and Paro-pamisus, the names of ridges of mountains on the N W of India, derive part of their names from *Kho*, and *Pabar*, words which signify mountains, or hills, in the Indian languages. Of Imaus, we have spoken before, in pages 126, and 150.

The most considerable change that has taken place in the geography of the tract comprehended in this small map, since the publication of the former edition,* is that which regards the positions of Cashgar, and the ridge of mountains on the west of it; in respect of India, and Samarcand. On this subject we have already touched, in page 97: and to which I shall beg leave to refer the reader, as an introduction to the remarks, that are to follow.

Samarcand, according to the tables of Ulug Beig, is 99° 16′ east of the Fortunate Islands; and Aleppo, in the same tables, is 72° 10′: that is, Samarcand is 27° 6′ E of Aleppo; and this last, being 37° 9′ E of Greenwich (by the Con. de Temps, 34° 49′ E of Paris), Samarcand should be in 64° 15′ east of Greenwich. If we reckon it from Casbin, which, according to M. Beauchamp's observation, is 49° 33′ E of Greenwich; and by Ulug Beig, 14° 16′ west of Samarcand; the latter, by this calculation, will be in 63° 49′: or

* The map in question, has been re-constructed for this edition.

26 minutes farther west, than if reckoned from Aleppo. But having with much labour, investigated the particulars of the distance, between Casbin and Samarcand; and compared them with the intermediate longitudes and latitudes, recorded in the Oriental tables, I am inclined to adopt 64° 15′, for the longitude of Samarcand. Its latitude, taken with the famous quadrant of Ulug Beig, is 39° 37′ and some odd seconds.

In this position, Samarcand stands $9\frac{1}{2}$ degrees of longitude west of Cashmere, according to my construction; and about 5 degrees of latitude, to the north of it.

Cashgar, in the tables of Abulfeda, is given at 7° 30′ of longitude east of Samarcand, by *Alfaras*; 7° 5′, by *Albiruni*: in those of Ulug Beig, 7° 14′; and 8° 10′ in Nasereddin's. The mean of all, is about $7\frac{1}{2}$ degrees; which would place Cashgar 2 degrees west of Cashmere.

Before we can compare the popular estimation of the distance, between Samarcand and Cashgar, with the difference of longitude between them; it becomes necessary, of course, to ascertain the parallel of Cashgar. This is given in the tables, universally at 44 degrees; which would place it nearly N E from Samarcand. That it bears considerably to the north of east, from Samarcand, is strongly implied by the direction of the roads, which lead to it, from Samarcand, and Bokhara: that from the former being through Cogend, and Andegan (or Ferganah); both of which lie to the north-east of Samarcand; the former at 7, the latter at 11 days journey from it. And from Bokhara, the road to Cashgar, lies through Tashkund, still more to the north than Cogend. Now if the direction of the road be north-east, for 11 days out of 25, the distance of Cashgar from Samarcand; and 14 out of 30, from Bokhara, nearly N E by N, it furnishes a strong presumptive proof that the direction of the whole line, is very far to the north of east. The only line of distance, that will in any degree help us to the latitude of Cashgar, is that given by Bernier (Vol. II. Letter ix.),

in which it is stated that the distance of Cashgar from Cashmere, is 44 journies, through Little Thibet; but that a shorter road lay through Great Thibet: and these journies, although not declared to be those of a caravan, may be understood to be such, from the narration. Now caravan journies, on such a distance as requires 44 days to travel through, cannot *in any country* be taken at more than 14 G. miles of direct distance, each day: and through such countries, as those between Cashmere and Cashgar are described to be (see the latter part of the same letter), perhaps at 11 or 12 only. The distance on this proportion, would reach to the parallel of 42° 45′; on a supposition that 7½, or 8 degrees of longitude, were allowed between Samarcand and Cashgar: but even if 9 or 10 were supposed, the bearing line from Cashmere is so nearly meridional, that 2 degrees of longitude, would make a difference of a few minutes only, in the latitude assigned to Cashgar.

Although no accurate result can be expected from this statement, yet I think it may be inferred, that Cashgar cannot be in a lower parallel than 42¼°: and then, admitting either of the distances from Samarcand (between 7½ and 10 degrees of longitude), the bearing would be from E N E, to E N E ½ N. Strahlenberg places it in 42¼° latitude; and at 2¼° of longitude, west of Cashmere: M. Petis de la Croix, in Timur, Book III. chap. vii. in 43°. M. D'Anville went into extremes, and placed it in 40° only.

The Ruſsian maps give no ideas, that can, or rather, should be followed, in the quarter of Samarcand, and western Tartary: forasmuch, as there is an error of 5° of longitude in the position of Samarcand, and the countries adjacent to it, in respect of the Caspian sea: the matter that should have occupied the square of 5 degrees, between the 80th and 85th degrees, being placed in that, between the 85th and 90th. To what extent the error may affect the positions, that lie on the north and east, I am ignorant.

Admitting then, that the capital of Cashgar is situated in, or about the parallel of 42¼°, we shall find that its distance from Sa-

marcand, and Bokhara, according to the report of the Orientalists, is consistent with the difference of longitude, given in their tables. It is indeed, very probable, that the difference of longitude was calculated to answer the computed distance. And supposing this to be the fact, we have the satisfaction of knowing, that we are in poſſeſſion of the actual sum of the computed distance, according to the ideas of the natives of the country: because the distance, and the difference of longitude, by their near agreement, verify each other!

Sherefeddin (in his History of Tamerlane, Book V. chap. iv. of the translation by M. Petis de la Croix) states the distance between Samarcand and Cashgar, at 25 journies. As it occurs in the account of the roads between Bucharia and China, these journies must be considered as those of the caravans, which ordinarily paſſed between the two countries:* and the highest rate at which each journey can be taken, on an extent of 25 days, is 15 G. miles; so that the amount of the distance, will be 375, on a direct line: and this laid off to the parallel of 42¼°, gives a difference of longitude of about 7¼°. If the journies should be considered as those which individuals perform, in the course of their own buſineſs, 16½ may be allowed; and the difference of longitude arising from this calculation, would be about 8¼°. Another account of the distance is found in Aſtley's Collection of Voyages and Travels, Vol. IV. p. 637, where it is stated to be 80 days from from Bokhara to Cashgar.† In this account, we have some idea of the scale of the days' journies, given us, by the number of journies between Bokhara and Urkenje; which are said to be 15; and the distance (by my series of positions, in Persia, &c.) being about 240 G. miles, leaves 16 for each day, on a journey of 15 days: and if we apply this

* Sherefeddin (in Timur, Book III. chap. vii.) says, that Oluc-Yulduz is two months journey, by the caravan, from Samarcand. Cashgar lay in the way: and D'Anville and Strahlenbergh, place it at 470, to 480 G. miles from Yulduz; or 32 caravan days, at 15 each. Of course, 28 would remain, for the space between Cashgar and Samarcand. This, although no positive proof; must be allowed to be, at least, a strong presumptive one.

† "By easy journies, such as merchants take, with their goods:" *i. e.* by caravan.

proportion to the 30 days between Bokhara and Cashgar (though manifestly too great), we have 480 G. miles for the whole distance, which will give, in effect, the same as the 25 days from Samarcand, $7\frac{1}{2}^{\circ}$ difference of longitude. Bockhara is five ordinary journies to the westward of Samarcand.

There is yet another account of the distance, in Astley; but it differs so much from all the rest, that I shall draw no conclusion from it. In this, Cashgar is stated to be 41 days of easy travelling (caravan I suppose) from Bokhara: and of these, the first 14 are to Tashkund, which (in my map of positions) is about 220 G. miles, N E by N, nearly, from Bokhara; answering to $15\frac{1}{2}$ for each day. But as 27 journies more, are to be reckoned (by this account) to Cashgar, although Tashkund is supposed to be five journies nearer to it, than Samarcand is; this calculation on the whole, makes a difference of seven days: and would occasion an increase of almost $2\frac{1}{4}^{\circ}$ of longitude, to the $7\frac{1}{2}^{\circ}$ arising from Sherefeddin's statement.

I confefs, if M. D'Anville had not adopted a position at $12\frac{1}{2}^{\circ}$ east of Samarcand, for Cashgar; I should have thought it unnecefsary to adduce so many authorities; or to have reasoned so much upon them: for nothing appears clearer, or more consistent, to me, than the accounts of the longitude of Cashgar: I mean, in the very general way, in which I intend to apply it. But, for the reader's satisfaction, as well as that the matter itself is curious, as it respects the geography of a country, so little known to Europeans; I shall insert a short paſsage from an eastern author concerning it.

Capt. Kirkpatrick quotes SHAHNAWAZ, as follows: "Cashgar is "bounded on the north, by the mountains of Moghulistan; one "extremity of which range, reaches to SHÂSH, and the other to "Terfan; and from thence to the Calmuck country. On the "west, it is bounded by a long ridge of mountains, from which "the Moghulistan mountains branch out. To the eastward, lie

"quicksand hills, forests, and deserts." The southern limit is not given.

Here we are told, very plainly, that the *northern* boundary of Cashgar, is a range of mountains, that extends on one side to SHÂSH; that is TASHKUND, on the river Sihon (or *Jaxartes*): and that these mountains branch out from another ridge, that forms the western boundary of the same kingdom. Of course, we are left to understand, that the northern frontier of it, is on a parallel, or nearly so, with the territory of Shâsh: and this is well known to lie on the north of Cogend; and to have its capital, Tashkund, situated in latitude 42½°, according to the tables of Abulfeda, Nasereddin, and Ulug Beig. The *long ridge of mountains, on the west*, is of course, that which extends from the N of Cashmere, to a point beyond the heads of the Sihon; separating, in that part, the countries of Cashgar, and Turkestan. In Sherefeddin's Timur, this ridge is named KARANGOUTAC; and is reckoned inaccessible, in a military point of view (Book V. chap. iv). We must once more call the reader's attention to the IMAUS, which separated the two SCYTHIAS; which this ridge of KARANGOUTAC represents. The two countries, or rather tracts, separated by it, and which answer to the two Scythias, are generally named the two BUCHARIAS, by Europeans. Of these, the western tract, or that of Samarcand, is named GREAT BUCHARIA; and the eastern, LITTLE BUCHARIA: and this includes, amongst other divisions, that of Cashgar and Koten. This tract is also the original country of the Moguls; or MOGULISTAN: and hence this term is applied by Shahnawaz, to the mountains that form its northern boundary.*

No doubt ought to remain, concerning the proximity of Cashgar to Great Bucharia; when we have proved, from the writings

* I apprehend that the term Bucharia, or Bokhara, is derived in the first instance, from the city of Bokhara, near the Jihon (Oxus), which was the emporium of the commerce, carried on by Europeans, in that quarter: and that it was afterwards extended to the adjoining country, beyond it. There are many examples of this kind: in particular, see page xxi of the Introduction, and the note.

of Abul Fazil, and Abdul Humeed, that the south-west extreme of Cashgar, joins to the N E quarter of Cabul: or admitting that part to be no more than a nominal dependency of it, the real territory itself is not likely to be very remote.

It seems to me that the capital of Cashgar, as well as the mountains on the north of it, which, in D'Anville's map of Asia, extend towards Acsou and Terfan; ought to be removed several degrees to the north-west, and to the neighbourhood of Al Shash: these being the mountains of Mogulistan, described by Shahnawaz. This will make a prodigious change in this part of our maps of Asia. Far more consonant to the ideas of Shahnawaz, is this part of Strahlenberg's map of the Ruſsian empire; which includes also the western Tartary, and the courses of the rivers Jihon and Sihon (*Oxus* and *Jaxartes*). His mount *Musart*, which paſses along the north of Cashgar, and Mogulistan in general, at the height of 43 and 44° of latitude, answers to the Mogulistan mountains of Shahnawaz; and does really join to Shash, on the west: having also *the long ridge* branching out, and forming the western boundary of Cashgar.

Strahlenberg's map is certainly a composition of great merit, for the time in which it appeared (1730); and proves that he had taken a great deal of pains to collect materials, for the tract lying between the Ruſsian borders, and those of India and Persia. Through the want of observations of longitude, his distances are often very faulty: but I am of opinion that his ideas were too much slighted, by some geographers, who came after him; and who have given the preference to matter of much leſs value, than that which he has exhibited.

Considering this part of Strahlenberg's map, in a very general way, the following are the observations that I have made on it.

1st. Petersburgh, the Caspian sea, and Samarcand, stand nearly in their proper positions, in respect of each other.

2d. Cabul, Cashmere, and Cashgar, although nearly right, in

respect of each other; are from 4 to 5 degrees too far east, in respect of the Caspian sea, and Samarcand.

3d. The head of the Irtish river is by several degrees too near to Cashgar; even as the latter stands in the map.

Hence it follows, that the space between the Irtish and Cashgar is, out of all proportion, contracted; whilst Great Bucharia is too much extended. Few parts of the continent of Asia, appear to have their geography so imperfectly described, as that between the Rufsian frontier, and Bucharia. I think, too, that our maps are in a great error, with respect to the positions of the countries lying between Bucharia and China: all of which, in my idea, have been made to recede too much from Bucharia, towards China. It is to the Rufsians that we are to look up, for better information.

In the discufsion of the position of Cashgar, I laid out of the question, entirely, the Chinese and Tartarian geography in Du Halde. At the same time, I would not be understood to impeach the truth of the Chinese geography of Tartary, in general; because there is an error in a particular part of it. It must stand or fall hereafter, according to its own merits. But the great error respecting the latitude of the upper part of the Ganges, in the same geography, ought to make us receive with caution the remaining particulars of it.

Having noticed an error or two of M. D'Anville's, which *fell in my way*, I feel it a duty even to *go out of the way*, in order to add my opinion to his, on the subject of *Serica*; and the limits of the world, as known to the ancients.* I cannot hesitate a moment, after examining the evidence, to determine with him, that the *Sera Metropolis* of Ptolemy, was situated at the N W extremity of the present empire of China; and very near to the parallel assigned it by that geographer. Of course, the knowledge of Ptolemy ended at this point, eastward. The rivers of Serica, al-

* See the Supplement to D'Anville's *Antiq. Geog. de l'Inde.*

though described to run to the parallel of 55°, and upwards; a parallel far beyond the heads of the Siberian rivers, yet are evidently meant, by the context, for the rivers of Eygur (Yugure), and Tangut. I differ in one particular from M. D'Anville; which is, that the ŒCHARDÆ, not the ITHAGURI, represent the YUGURES: I think the position clearly points it out. As for the error in Ptolemy's latitude, as well as his longitude, it must be placed to the account of badneſs of materials. Had Ptolemy lived in the present times, he might have expreſsed his wonder, that, considering the advantages WE poſseſs, OUR maps of this part should be so incorrect; when the tables of Abulfeda, Nasereddin, and Ulug Beig, and the History of Timur, by Sherefeddin, have been so long amongst us, in an European language.*

After so many digreſsions, for which I solicit the reader's indulgence, I shall close the account of the small map, with an observation or two, respecting some geographical misconceptions which I have observed to prevail. The first is, that the modern Bucharia (or Bokhara), is the same with the ancient Bactria. This is so far from being the case, that Bucharia is situated beyond the river anciently called the *Oxus*, or the modern Jihon: and is the country anciently named *Sogdiana*; from *Sogd*, the valley: that is, the beautiful valley, in which Samarcand (anciently *Maracanda*) is situated. Bactria, or Bactriana, on the contrary, lay on the *south* of the Oxus; and comprehended the present provinces of Balk and Gaur; and probably part of Korasan. Mawer-ul-nere, is also applied to the country beyond the Jihon; and between the lower parts of the courses of that river, and the Sihon, or ancient

* The tables were translated about the middle of the last century, by Dr. John Graves, of Oxford: and the History of Timur, by M. Petis de la Croix (the younger; not the compiler of the Life of Gengiz Cawn); early in the present century. The many references that I have made to the works, thus brought to our knowledge, by the well-applied learning of these gentlemen; furnish the best eulogy in my power to bestow, both on the works themselves, and on the translators of them.

It is to be regretted, that Abulfeda's Persian geography, was not one of the subjects made choice of, by the learned gentlemen, who have favoured the world with translations of certain MSS. in the library of the King of France.

Jaxartes: Mawer-ul-nere signifying *the country beyond the river*; or *Transoxiana.*

The other misconception respects ancient *Parthia.* Very inaccurate ideas prevail, concerning the local situation of that country. Those, whose knowledge of it, is collected chiefly from its wars with the Romans, conceive Parthia to be only the country bordering on the Euphrates and Tigris; as the Parthian boundary, on the extension of their empire westward, met that of the Romans. Strabo has either been mistaken in this point, or has not fully expreſsed himself, where he describes the Parthians who defeated Craſsus, as the descendants of those Carduchians, who gave so much trouble to Xenophon, during the celebrated retreat of the Greeks. It is probable, or at least poſsible, that the Parthians might have had in their army at that time, some detachments from among those hardy mountaineers; as the Carduchi were then numbered among their subjects: but the bulk of the Parthian army, came from Persia, their proper country. Whoever considers the slight subjection in which the Carduchians were held, even during the vigorous reigns of the first Persian emperors, will not expect that the Parthians had many recruits from that quarter. The history of the Parthian geography is briefly this: Parthia proper, was a small province, very near to the south-east extreme of the Caspian sea; which territory, after the division of Alexander's empire, fell to the share of the Seleucidæ, kings of Syria, and of the east; about 300 years before our æra. About 50 years after, Parthia rebelled; and together with Hyrcania, and other adjoining provinces, became an independent state, under Arsaces. As the empire of the Seleucidæ grew weaker, the Parthians extended their country westward; and the fine province of Media (now Irak-Ajami) fell to them: and within a century after the foundation of their state, it had swallowed up all the countries from the Indus to the Euphrates, Bactria included: and this province had thrown off the yoke of the Seleucidæ, long before Parthia. The Parthian conquests

in Armenia, about 70 years before Christ, brought them acquainted with the Romans; whose conquests met theirs, both in that country and in Syria. The Parthians, together with their conquests, had advanced their capital westwards: and had established it on the Tigris at Seleucia, or rather Ctesiphon (near the present Bagdad) before their wars with the Romans commenced. The particulars of their first wars with the Roman people, which continued about 65 years, are too well known to be repeated here, had this been a proper place for it; such as the expeditions of Pompey and Anthony; and the defeat of Crafsus. On occasion of this last event, the Parthians extended their conquests further westward, but were afterwards compelled to retire: and they generally lost ground in Armenia and Mesopotamia, during the time of the Roman emperors. Trajan penetrated to their capital; and satisfied his curiosity by embarking on the Indian sea. The moderation of Adrian restored the ancient boundary of the Euphrates. In A. D. 245, Persis, or Persia proper, which had hitherto ranked as a province of Parthia, gained the ascendancy; and, under Artaxerxes, put an end to the dynasty of the Arsacidæ, and restored the ancient name of Persia to the empire; after that of Parthia had existed about 480 years. So that, in fact, the Parthian empire, considered generally, was the Persian, under another name.

*** It should have been mentioned, in page 166, that the author of the *Heft Akleem*, a geographical work that was compiled during the reign of Acbar, states the following fact. "The sovereignty of Badakshan, continued in a family, who "derived their descent from Alexander the Great; until Abu "Said Khan Goorgan conquered the country, and put an end "to the dynasty of Macedonian princes, in the person of "Sultan Mohamed, the last monarch of that race." The date is not given. (Kirkp. MSS.)

SECTION IV.

The Tract situated between the KISTNAH *River, and the Countries traversed by the Courses of the* GANGES *and* INDUS, *and their principal Branches: that is to say, the middle Parts of* INDIA.

THIS very extensive tract is bounded on the north-east by the soubahs of Bengal, Bahar, Allahabad, and Agra; on the N W by the course of the river Puddar; on the east and west by the sea; and on the south by the river Kistnah, or Krishnah: and comprehends in general the soubahs of Guzerat, Malwa, Berar, Orifsa, Candeish, Amednagur (or Dowlatabad), Visiapour (or Bejapour), and Golconda. It is about 800 British miles in length, from N W to S E; and 600 wide: and has in and about it, many points that are determined either by celestial observations; or inferred from such points, by the help of surveys, or good charts.

The fundamental points on which the construction and scale of this part depend, are as follow:

On the north and north-east, Agra, as determined by observations and survey (page 48); and Calpy, Chatterpour, Rewah, Burwah, and Balasore, inferred from measured lines drawn from other places of observation. On the east, Cattack, as determined by Col. Pearse (page 11). On the south, Masulipatam, as determined by Col. Pearse, and Capt. Ritchie (page 12). On the west, Bombay, by the observations of the Hon. Mr. Howe (page 31), and

Surat, Cambay, and Diu Point, inferred from charts and surveys (page 33). And in the interior parts, Narwah, Sirong, Bopaul, Hufsingabad, Burhanpour, Poonah, Amedabad, by Mr. Smith's observations, and General Goddard's march: Nagpour, Ruttunpour, and Gurrah, by Mr. Ewart's observations and surveys; and Arungabad, Hydrabad, Sumbulpour, Agimere, and Areg (near Visiapour), by miscellaneous materials. I shall proceed first, to give the authorities by which these *primary stations* or points, were determined; and afterwards shew how the intermediate parts were filled up, in detail. The construction of the sea coasts, on both sides of this tract, has been already discufsed, in Section I.: and I shall begin my account of the construction of the inland parts, with Mr. Smith's and General Goddard's lines acrofs the continent, from Calpy to Bombay, and Surat.

The Rev. Mr. Smith set out from Calpy with Col. Upton, in 1776, on an embafsy to the Mahratta court, at Poonah; and fell into the great road from Delhi and Agra, to the Deccan, at the city of Narwah; which is situated on the river Sindeh, near the entrance of a famous pafs, that leads through the chain of mountains that divide Malwa from Agra. From Narwah, he proceeded to Sirong, a city of Malwa, subject to Madajee Sindia: and from thence to Burhanpour, the capital of Candeish: and at one period, of the Deccan also. It is yet a flourishing city; and is situated in the midst of a delightful country. In his way to this place from Sirong, he crofsed the famous river Nerbuddah; formerly the reputed boundary of the Deccan, to the north. From Burhanpour, he went to Poonah, the capital of the western Mahratta empire, crofsing the heads of the Godavery and Beemah rivers in his way: and from Poonah to Bombay. During all this route, he took observations of latitude and longitude, as often as opportunity offered; which was not unfrequently: and with these, together, with the intermediate bearings of the road, he constructed a map, which is no lefs valuable on the score of its general accuracy, and extensive

information; than curious, by the novelty of its subject. We had then for the first time, a geographical line, on which we could depend, drawn across the continent of India, through the principal points between Agra and Poonah; and which, by establishing so many interesting positions, has enabled us to correct several routes, which, without it would have remained very indeterminate. Narwah, for instance, corrects the bearing and distance of the road between it, and Agra; Sirong, the road to Ougein, and Mundu; and Burhanpour, the position of Aurungabad; and the bearing of the roads to Surat, Hydrabad, and Nagpour.

General Goddard's celebrated march from Calpy to Surat, touches on the route of Mr. Smith, at Calpy, Sirong, Bopaul, Hurdah, and Burhanpour: and the map of it, which remained in the general's poſsesſion at the time of his death, was said to be drawn from the materials furnished by the field engineers; who measured the distances, and took the bearings of the road, the whole way. On a comparison of the difference of longitude shewn by this map, with that resulting from Mr. Smith's observations, the difference was 6′ 35″; the measured line giving so much more than the observations.

General Goddard's map gave the miles of westing, between Calpy and Sirong 109¼, or difference of longitude - - - - - - -	2°	0′	15″
And from Sirong to Burhanpour 96¼, miles of westing, or difference of longitude - - -	1	44	20
Whole difference between Calpy and Burhanpour	3	44	35
And, Mr. Smith's longitude of Calpy is -	80°	0′	0″
——————— Burhanpour -	76	22	0
Difference of longitude by observation	3	38	0

And in the interval between Calpy and Sirong (about 2 degrees), the measurement exceeded the difference of longitude by observation 4 minutes; so that the measured line exceeded the distance by observation, proportionally through each interval.

Now it remains to be observed, that Calpy, on the south bank of the Jumnah river, the last point in the survey, that way, and the first in Mr. Smith's route; stands in my map, in lat. 26° 7′ 15″, and in lon. 80° 4′; while Mr. Smith reckons it in 80°. Again, on the west side of India, I have taken Bombay at 72° 40′ (see page 31), and Mr. Smith places it in 72° 45′; so that, in fact, he is 4′ to the west of my account at Calpy; and 5′ to the east of it at Bombay: his whole difference of longitude between Calpy and Bombay, being 9′ less than what I have taken it at. And again, it has been observed that Mr. Smith reckons 6′ 35″ less between Calpy and Burhanpour, than Goddard's measured route gives. It is certain that observations of longitude, taken in the ordinary way, cannot be expected to correct small errors in distance, so well as measured lines; and therefore it is no impeachment of the general utility of Mr. Smith's observations, that I have ventured to deviate from them, in fixing the positions of some places in the road across the continent.

Narwah, or Narwha, is the first point that I shall notice in Mr. Smith's map, from Calpy. He places this city and fortress in lat. 25° 40′; lon. 78° 17′; his difference of longitude from Calpy, being 1° 43′. Mr. Cameron, who surveyed the roads and country between Etayah and Sirong, reckons 1° 3′ difference of latitude, and 57 miles of westing, or 1° 4′ difference of longitude from Etayah to Narwah. Now, Etayah being by the survey in 26° 43′ 40″ lat.; and 79° 17′ lon.; the latitude of Sirong comes out perfectly right, but the longitude is 4′ to the west of Mr. Smith's account; or 78° 13′. I cannot, however, determine with what degree of exactness this survey was made; and I have placed Narwah in 79° 17′.

Sirong (called also Seronge) is by Mr. Smith's observations, in lon. 78° 4′; and as General Goddard's map makes it 2° of longitude west from Calpy (which is in 80° 4′ by the above account), they both agree in this point, although they differ in the quantity of westing between the two meridians of Calpy and Sirong: for Mr. Smith's difference of longitude is only 1° 56′; and the measured line exceeds it by 4 minutes. The latitude of Sirong is 24° 4′ 40″. It is proper to observe, that General Goddard's route crofsed Mr. Smith's about 6 miles to the S E of the latter place; but the survey was *closed* to it.

Between Calpy and Sirong, General Goddard's route pafsed through Chatterpour, a city in the western quarter of Bundelcund (or Bundela). This place was formerly visited, and its position determined by mensuration, from Rewah; by Capt. Carter. He placed it in lat. 24° 58′ 30″; lon. 79° 56′ 30″. General Goddard's route represents it as being half a minute in latitude more to the north, that is in 24° 59′; and 9′ 30″ more westerly in respect of Calpy. As it was fixed by a measured line drawn westward Rewah, its longitude ought to be better determined by it, than by a meridional line drawn from Calpy; and accordingly, I have not altered its position.

Bopaltol is the next place where the roads meet; Mr. Smith's longitude of it is 77° 48′, and lat. 23° 13′ 30″. General Goddard's map gives 32 G. miles, or 35′ 15″ of longitude, from Sirong; making Bopal in 77° 28′ 45″. I have placed it in 77° 28′ lon.; and 23° 14′ latitude. It appears unaccountable that there should be no lefs than 19′ difference, between Goddard's account and Mr. Smith's, in the longitude of Bopal. I copied the longitude, as it stands above, from Mr. Smith's map.

Hurdah, on the south of the Nerbuddah river, is the next point of junction of the two routes. This, Mr. Smith places in 77° 21′ 15″; and by Goddard's line, it comes out 1′ 30″ more to the west; or 77° 19′ 45″. It will be recollected, that as General Goddard

at setting out, was 4′ to the eastward of Mr. Smith's account (at Calpy), Hurdah will be 5′ 30″ on the whole, more to the westward, than Mr. Smith's difference of longitude from Calpy, would give.

Between Bopal and Hurdah, General Goddard's route makes a large elbow, or angle, to the south-east, to Hufsingabad Gaut, on the south bank of the Nerbuddah river; and on the frontiers of Nagpour, the eastern division of the Mahratta empire: thus establishing a most useful primary point or station, in a quarter where it was the most wanted. Hufsingabad is placed in lat. 22° 42′ 30″; lon. 77° 54′; and about 140 G. miles to the N W of Nagpour city.

The two routes run often into, and acrofs each other, between Hurdah and Burhanpour. The latter, as is said before, is by Mr. Smith's observation, in lon. 76° 22′; and in lat. 21° 19′: and by Goddard's measurement, which gives 3° 44′ 35″ from Calpy, in lon. 76° 19′ 25″; which, rejecting the seconds, is the longitude I have adopted for it; not altogether on the evidence of the measured distances themselves, but because they agree with the whole difference of longitude arising from the observations adopted in the map, between Calpy and Bombay (see page 204).

Burhanpour is a very fine city, and was one of the earliest conquests made in the Deccan. In Acbar's division of the empire, it ranks as the capital city of the soubah of Candeish. It is now in the hands of the Poonah, or western Mahrattas. About 20 miles to the N E of it, is a very strong fortrefs named Aseer, or Aseergur.

The final separation of the two routes, is at Burhanpour, from whence Goddard went westward to Surat; and Smith, south-westward, to Poonah. The measure of the road to Surat gives 3° 30′ 45″ difference of longitude; which taken from 76° 19′, leaves 72° 48′ 15″ for the longitude of Surat; which I have adopted. This subject has been already discufsed, in the first Section (page 32), where it is observed, that the different authorities between

Bombay and Surat, gave 10′ difference of longitude between them; by which (as Bombay is taken at 72° 40′) Surat would be in - - - - - 72° 50′ 00″

If Mr. Smith's observations at Burhanpour was adopted 72° 22′, then it would be in - - 72 51 15

If his longitude of Bombay, 72° 45′, then - 72 55 00

If Mr. Howe's - 72 40, with an allowance of 8′ 15″ instead of 10′ difference of lon. - 72 48 15

The last point in Mr. Smith's route, is Poonah, and the longitude given for that, is 74°; or 1° 15′ east of Bombay. But as I have taken Bombay at 72° 40′, Poonah, to preserve its proportional distance, should be in 73° 55′; which I have accordingly placed it in; so that it stands in respect of Burhanpour, only 2 minutes farther to the westward, than Mr. Smith places it. Its latitude is 18° 30′. Between Burhanpour and Poonah, Mr. Smith's map establishes some useful points, from which other routes may be laid off; such as Nufserabad, Chandor, Unkei-Tenki, Bahbelgong, and Nimderrah Gaut.

Poonah is the capital of the western Mahratta empire, and is situated about 30 miles on the east of the Gauts; 100 road miles from Bombay; and about 75 from the nearest sea coast. It is meanly built, and not large; and lies quite open and defenceleſs. Pooroonder, a fortreſs on a mountain, about 18 miles to the ESE of Poonah, is the place of refuge in case of invasion: there the archives of government are deposited; and there I believe the principal officers usually reside. Whenever an invasion has happened, the Mahrattas never thought Poonah, a place worthy of defence: and have accordingly destroyed it with their own hands. In a state that can conveniently exist without a great capital, no doubt but that great advantages are gained, in war, by a release from such an incumbrance. An overgrown capital, full of rich inhabitants, and a kind of general depository of wealth, however pleasant it may be, as it respects polished society, and the elegancies of life; yet

from the greatnefs of its extent, and other circumstances, incapable of defence; must be considered as a great political evil in a state: it is like a fortrefs that exposes its weakest part to the enemy, and points his attacks: and, to pursue the allegory, there may be some danger of the garrison's sacrificing the interest of the empire at large, in order to preserve their own property, in the hour of assault. The Scythians, who were not chained to the soil, could never be conquered: and those who have no large capitals, stand in the next degree of security; all other circumstances taken into the case. If the question be considered, as it concerns morals, the objections are yet stronger: for the larger the capital, the greater will be the proportion of the population that is corrupted.

Amedabad, the capital of Guzerat, was the extreme point of General Goddard's marches to the northward, in the province of Guzerat. In the first Section, a comparison was made between the scale and bearing of the map of General Goddard's marches in Guzerat, and those of the surveys taken between Surat and the Myhie river; and it was found to agree so well, that the line between Brodera and Amedabad might be very safely adopted. The bearing was N 36° W, and the distance 53,2 G. miles; giving for the position of Amedabad, 22° 58′ 30″ lat.; and 72° 37′ lon.; or 3′ west of Bombay. By M. Thevenot's account, the latitude is 23° and some odd minutes: and 23° by the Ayin Acbaree.

Amedabad is a very considerable city, and succeeded Mahmoodabad, as capital of Guzerat. It is one of the best fortified cities of Hindoostan; and made a good defence when taken by General Goddard in 1780. On the peace of 1783, it was restored to its former poſsefsors, the Poonah Mahrattas. Travellers have dwelt much on the beauty, and convenient situation of this city, which is in a level country, and on the banks of a small navigable river, named Sabermatty; and which, together with other confluent streams falls into the head of the gulf of Cambay, near to the city of that name. Cambay, is indeed, the port of Amedabad, and is

distant from it about 56 road miles. It is a large city, and appears to be the *Camanes* of Ptolemy; although the gulf, which is now denominated from Cambay, had then its name from *Barygaza*, or the modern Baroach.

Aurungabad is a point of considerable importance to the construction of the western part of the tract in question; and although we have neither its latitude, longitude, nor distance *accurately measured* from any one point; yet the sort of coincidence that arises between a number of estimated routes, from six different places, in opposite directions, round it; impreſs a certain conviction of its being placed nearly in its true position. It will be neceſsary to particularize the principal of these routes. One of them regulates also the positions of Hydrabad, Beder, and Mahur; and is that of M. Buſsy from Masulipatam. The copy from whence I collected my ideas on the subject, is that included in the late Mr. Montresor's map of the southern part of India. As his map goes no farther west than Aurungabad, we may conclude that he has not altered the original bearing and distance, with a view to reconcile its situation to any other place to the north or west.

Masulipatam is already placed in the map, in lat. 16° 8′ 30″, lon. 81° 12′, on the authorities of Col. Pearse and Capt. Ritchie (see page 12). This is a city and port of trade, near the mouth of the Kistna river; and appears to be situated within the district named *Mesolia*, by Ptolemy. Between this place and Bezoara (or Buzwara) a fort on the north side of the Kistna river, M. Buſsy's route allows only 36 G. miles; but as there is existing, a map of Major Stevens's, which fixes the said distance at 40,3 G. miles, I have adopted it; and allowed M. Buſsy's authorities to commence only at that point. Bezoara, ſo placed, is in lat. 16° 38′; and lon. 80° 39′. Then from Bezoara to Aurungabad, the bearing is given at W 35° 10′ N, 323 G. miles; producing 3° 6′ difference of latitude; and 264 of westing; or difference of longitude (in lat. 18°) 4° 38′. This would place Aurungabad in lat. 19° 39′, lon. 76° 1′.

Bufsy's (or rather Montresor's) whole distance from Masulipatam to Aurungabad, was 359.

Let us now examine what *data* we have to check this long line of M. Bufsy's, from the side of Surat, Poonah, and Burhanpour. The position of Surat has been just accounted for: and Noopour, a city on the road from Surat to Burhanpour, is by Goddard's route 59′ of longitude to the east of Surat; or in lon. 73° 47′ 15″. And from this place to Aurungabad, Tavernier reckons 105 cofses; which, at 42 to a degree, is 150 G. miles of horizontal distance. Now, Noopour, Aurungabad, and Bezoara, lie as nearly as poſsible in a right line, whose extreme length is 475 G. miles. Tavernier's 150, added to Bufsy's 323, make up 473; or the whole space, within two miles. But from the nature of a march of an army in a warm climate, great part of which is often made in the night, it must neceſsarily require correction; in the bearing at least, and probably in the distance too. Nor can the 105 cofses of Tavernier, be expected to be even so correct as the march: it is therefore a matter of surprise that only so small a difference should have arisen. It should be remembered that 4,3 miles were added to M. Bufsy's original distance, between Masulipatam and Bezoara; so that the whole original error was 6,3; if we do not refer a share of it to Tavernier's estimated distance. It is proved in another instance by Major Gardner, in Peach's march from Ellore towards Warangole, that M. Bufsy's geographer has given too little distance. This is probably an error of the compiler, not of the surveyor; it being an error of a different kind from what might have been expected in the ordinary way of measuring distances with a perambulator.*

The latitude of Aurungabad is inferred from its distance from Burhanpour given by Golam Mohamed † at 66 cofses; and as the

* That long distances *may* be accurately measured by a perambulator, I need only mention, that during the Bengal survey, I measured a meridian line of three degrees, with a perambulator, and found it to agree minutely with the observations of latitude. However, due allowance was made for the irregularities of the ground, whenever they occurred. The country, indeed, was flat the whole way.

† A confidential person, sent by Col. Camac, in 1774, to explore the roads and country of the Deccan, and to gain intelligence concerning the Mahratta powers.

bearing is not far from meridional, we may state the difference of latitude at 1° 34′; which taken from 21° 19′, the latitude of Burhanpour, leaves 19° 45′, for that of Aurungabad.* Now, M. Bufsy's line, gives only 19° 39′; which is 6′ too far southwardly, by this account. If 19° 45′ be adopted, some further addition must be made to the line of distance from Bezoara; but it is too trifling a matter to require discufsion. In effect, the longitude of Aurungabad by these *data*, will be 76° 2′ 30″; lat. 19° 45′.

Two more lines of distance are given, from Nimderrah Gaut and Bahbelgong; two points in Mr. Smith's route, on the west and S W of Aurungabad. Nimderrah is in lat. 19° 12′ 45″, lon. 74° 54′ 30″: and Bahbelgong in lat. 20° 45′, lon. 74° 51′ 30″. M. Anquetil du Perron furnishes these distances. That from Nimderrah to Aurungabad, he reckons 32 cofses; and that from Bahbelgong 34½. Now, as the distance between Poonah and Nimderrah, is known, it furnishes a scale for the rest of his route. He makes this distance 34½ cofses; but it is clear that he reckoned by some other standard than the common cofs (pofsibly he reckons leagues and cofses the same, as we shall have occasion to remark in his route from Goa to Poonah) for the distance being 69,7 G. miles of horizontal distance between Poonah and Nimderrah, it should rather be 48½ cofses, than 34½. However, taking his distance for a scale, whatever the denomination may be, the distance between Nimderrah and Aurungabad, will be 64,7 G. miles; and that from Bahbelgong, 70,2. And the mean of these accounts give also, 76° 2′ 30″ for the longitude of Aurungabad.

There is yet another line of distance to Aurungabad, and that is from Nagpour; whose position is ascertained with precision. Two accounts of the estimated distance between them, collected by Lieut. Ewart, are, 162, and 165 cofses: the mean of which, 163½, at

* M. D'Anville reckons the same difference of latitude between the two places, but he has placed both of them too far north by 24 minutes; following I apprehend, the latitude of Burhanpour, given in the Ayin Acbaree.

42 cofses to a degree, is 233 G. miles of horizontal distance. This would place Aurungabad, admitting its latitude to be 19° 45′, in 75° 53′ 30″ or 9′ to the west of the other accounts. The result of the short distances, are doubtlefs to be preferred to that of the long ones; and I insert this last only to shew the extremes of the different accounts.

Lastly, if the distances from the four nearest points are taken; that is, from Noopour 150 G. miles; Burhanpour 95; Nimderrah 64,7; and Bahbelgong 70,2: the mean point between the intersections of these, will be in lat. 19° 44′, lon. 76°.

Although I have taken the latitude at 19° 45′, as the distance from Burhanpour is so nearly meridional: yet the intersections of the other distances, point to its being in a lower latitude, by 4 or 5 minutes: in which case, its position would also be somewhat more westerly.

Upon the whole, I have placed Aurungabad in lat. 19° 45′, lon. 76° 2′ 30″; and by what has been said, it cannot be much out of its true place: but as it is a point of great importance in the geography of this part of India, it required particular discufsion; being the centre of several roads; and the bearing of that long line, between it and Hydrabad, Beder, Calberga, &c. depending on it.

Aurungabad is but a modern city; owing its rise from a small town, to the capital of the province of Dowlatabad, to Aurungzebe; from whom also, it had its name. After the Deccan became a province of the Mogul empire, it was reckoned the provincial capital; and continued to be so, after the Nizams became independent of Delhi; and until the encroachments of the Poonah Mahrattas, of late years, made it an uncomfortable residence to the Nizam. When the Deccan was first invaded by the Patan emperors of Delhi, Deogire was the capital of the province of Dowlatabad, and was situated near the fortrefs of the same name; which is built on a mountain about 4 or 5 cofses to the N W of Aurungabad; and is deemed impregnable by the people of the country.

The Emperor Mahomed, in the 14th century, made an attempt to establish the capital of his empire at Deogire; and to that end almost ruined Delhi, in order to drive the inhabitants to his new capital, about 750 miles from their ancient habitations. This scheme, however, did not succeed: and was if poſsible the more absurd, as at that time but a small progreſs had been made in the conquest of the Deccan.

The pagodas of Elora are in the neighbourhood of Dowlatabad, and are mostly cut out of the natural rock. M. Thevenot, who particularly describes them, says, that for two leagues together, nothing is to be seen but pagodas, in which there are some thousands of figures. He does not, however, greatly commend the sculpture of them: and, I apprehend, they are of early Hindoo origin. We must remember that Deogire, which stood in this neighbourhood, was the greatest and richest principality in the Deccan; and that the fame of its riches, incited Alla to attack it. in 1293: and these elaborate monuments of superstition, were probably the offspring of that abundant wealth, under a government purely Hindoo.

M. Buſsy's line includes within it, the positions of Hydrabad, Golconda and Beder. When the line is corrected as above, to Aurungabad, Hydrabad will be found in lat. 17° 24′; which I conceive to be too far to the northward, considering its reputed distance from Nagpour and Cuddapah. M. D'Anville too (in his Eclairciſsemens) says that the latitude of Hydrabad is 17° 12′. How he came by his information, I know not; but I believe it to be nearly right: and this is the parallel it is generally placed in, A third circumstance tending to confirm this opinion, is, that the map of Col. Peach's march from Ellore to Warangole (in 1767), in which the distances were measured, and the angles of position taken by Major Gardner, places the latter only 37 G. miles from the position in which Hydrabad stands by M. Buſsy's line. It can hardly be deemed an impeachment of the general truth of a line

of 360 G. miles, measured after an army, that a position, in or near that line, should be ten or twelve miles out of the supposed line of direction. It is conformable to my idea of the distances of Nagpour, Cuddapah, and Warangole, that Hydrabad should be in 17° 12′, rather than in 17° 24′; and I have accordingly followed M. D'Anville: giving the lines between it and Aurungabad on the one side, and Condapilly on the other, a new direction accordingly.

Although by proportioning M. Bufsy's march from Bezoara, Hydrabad is placed in 78° 51′ longitude; or only 114 G. miles from Bezoara, yet the different reports of the distance between thefe places, is much greater than the construction allows. For 114 miles will produce only 87½ cofses, according to the proportion of 46 to a degree (which is the result of the calculation made on the road between Aurungabad and Masupalitam, page 5); whereas, one account from General Joseph Smith, states the number of cofses at 98; and another from a native, at 103. Again, Col. Upton reckoned 118½ cofses between Hydrabad and Ellore, which the construction allows to be only 138 G. miles; or 105¾ cofses, according to the same proportion of 46 to a degree. So that I have either mistaken the longitude of Hydrabad, which is improbable, all circumstances considered; or the cofs is even smaller than I have supposed. Or the road leading through a hilly and woody country, is more crooked than ordinary: * and the journals remark its being very woody, and thinly inhabited, between Condapilly and Hydrabad. Until we have the latitude and longitude of Hydrabad, or some place very near it, we cannot be satisfied with its present position; for M. Bufsy's line is too long, to be exact, without the aids of latitude to check it. The reputed distance between it and Nagpour, 169 cofses, agrees perfectly with its corrected parallel of 17° 12′.

* General Smith's proportion of cofses to a degree, is 51½; Col. Upton's 52½; and the map by the native 55.

Hydrabad, or Bagnagur, is the present capital of the Nizams of the Deccan; who since the dismemberment of their empire, have left Aurungabad, the ancient capital; which is not only in a corner of their dominions, but in that corner which lies near their hereditary enemy, the Poonah Mahrattas; and which is also the least defensible. About 5 or 6 miles to the W N W of Hydrabad, and joined to it by a wall of communication, is the celebrated fortreſs of Golconda,* occupying the summit of a hill of a conical form, and deemed impregnable. When Aurungzebe conquered the kingdom of Golconda, in 1687, this fortreſs was taken poſsession of by treachery.

The next *primary point* or *station*, and one of the most important, as being the farthest removed from any other given point, in the whole construction, is Nagpour; the capital of the eastern division of the Mahratta empire, and nearly in the centre of India. This last consideration, and the number of roads iſsuing from it to the circumjacent cities, most of which roads had their distances given by computation only, made the determination of this point a grand *desideratum* in Indian geography. Mr. Hastings therefore, with that regard to useful science and improvements of every kind, which has ever distinguished his character, directed a survey to be made of the roads leading to it from the western frontier of Bahar; and also from the side of Allahabad. This was executed in 1782 and 1783, by Lieut. Ewart, under the direction of Col. Call, the Surveyor General. The result of this expedition was perfectly satisfactory. He began his measured line at Chittra, or Chetra, in Bahar, placed in 85° of longitude, and in lat. 24° 12′, in my map of Bengal and Bahar; and his difference of longitude from thence to Nagpour, in lat. 21° 8′ 30″, was 5° 16′ west: by which Nagpour would be in 79° 44′. And from Nagpour back to Benares, in lon.

* The termination, *conda*, or *kond*, signifies fortreſs, and often occurs in the south part of India; as *cot*, and *cote*, which have the same signification, do in the north. *Gur* is used in the same sense occasionally in every part.

83° 13′, in the same map, he made 3° 25′ 10″, difference of longitude, east; which placed Nagpour in lon. 79° 47′ 50″; or 3′ 50″ only, different from the other account; and this I suspect to arise partly from the error of his needle. If we close the account back again to Chittra, the place he set out from, he made only 4 minutes difference, in the distance out and home: and the road distance, was 600 B. miles from Chittra to Nagpour, only.

Taking the mean of the two accounts, the longitude of Nagpour will be 79° 45′ 55″, or 79° 46′. The observations for determining the longitude at this place, by Lieut. Ewart, do not accord with the above account, by a considerable number of minutes: therefore I have not inserted them here, in expectation that they may be compared with corresponding ones, taken at places whose situations are already ascertained.

As Mr. Ewart's route to Nagpour, was by way of Burwah, Surgoojah, and Ruttunpour: and from thence to Banares, by Gurry, the capital of Mundella, he ascertained the positions of those places, satisfactorily; and by that means added to the number of primary stations. The latitudes were constantly taken, in order to correct the route, in detail. Nor did his work end here: for his inquiries at Nagpour, furnish a number of estimated or computed routes from that capital to Burhanpour, Ellichpour, Aurungabad, Neermul, Mahur, Chanda, &c. that is, in every direction except the S E; whence we may infer the state of that tract to be wild, uncultivated, and little frequented. And it appears by his intelligence, that the way to Cattack is unsafe, in any direction farther south than Sumbulpour.

Nagpour, the capital of Moodajee Boonslah, the chief of the eastern Mahratta state, is a city of modern date; and though very extensive and populous, is meanly built, and is open and defenceless, save only by a small citadel, and that of little strength. The city is said, by Golam Mohamed, to be twice as large as Patna; but Mr. Ewart's account makes it but of a moderate size. Moodajee's

principal fortrefs, the depositary of his treasures and valuables, is Gyalgur, called also Gawile, situated on a steep mountain, about 103 G. miles to the W by N of Nagpour. Each of the native princes in India, has a depositary of this kind, and commonly at a distance from his place of residence: the unsettled state of the country making it neceſsary. The country round Nagpour is fertile and well cultivated, interspersed with hills of a moderate height: but the general appearance of the country at large, and particularly between Nagpour and Bahar, is that of a forest, thinly set with villages and towns. It is the western and northern parts of Moodajee's country, that produce the largest part of his revenue; together with the *chout*, or proportion of the revenues of Ellichpour, &c. held by the Nizam.

Ruttunpour is a city lying in the road from Bahar to Nagpour, and is the capital, and residence of Bembajee, who holds the government of the eastern part of the Nagpour territories, under his brother Moodajee. This place, also, has its position fixed very accurately by Mr. Ewart, in lat. 22° 16′, lon. 82° 36′. It is a *primary station* of great use, as it regulates all the positions between Cattack and Gurry-Mundella; and between Bahar and Nagpour. As its corrected position differs only 3 miles from the former estimated one, collected from Col. Camac's observations and inquiries; it serves as an additional proof, how much may be effected, by a careful examination and register, of the estimated distances on the roads: and this mode of improving the geography of India, may be adopted when all others fail. An intelligent person should be employed in collecting such sort of information, as Mr. Ewart collected at Nagpour; from the principal cities in the least known parts of Hindoostan; at the same time determining the position of such cities, by celestial observations: by which means, a number of fixed points would be established, from whence the computed distances might at once be laid off, and corrected. More could be done in this way in a short time, towards completing the geography,

than most people can easily conceive: and, I flatter myself, it will be soon adopted.

Agimere, Ajmere, or Azmere, is the *primary point* on which the geography of the N W part of the tract in question, rests; and is determined by the estimated distances from Agra and Burhanpour. An itinerary kept by John Steel, reckons 119 cofses between Agra and Agimere: and Tavernier, who left Agimere to the north, in his way from Amedabad, reckoned 100 cofses from Bandersandry to Agra; and Bandersandry being 14 from Agimere, by Steel's account, we may take 114 for the whole distance, from Agra to Agimere. A map of Malwa and its neighbourhood, communicated by Mr. Bensley, places Agimere 180 G. miles to the west of Gwalior; and another map, communicated by Mr. Hastings, gives the same distance. By the construction, founded on Mr. Steel's 119 cofses from Agra, and which produce $172\frac{1}{2}$ G. miles, Agimere is found to be $10\frac{1}{2}$ miles short of the distance from Gwalior, in the above maps.

The parallel of Agimere, is determined by Sir Thomas Roe's computation of the distance from Burhanpour to Agimere, through Mundu and Cheitore; and that is 222 cofses, or 318 G. miles: and the intersection of the two distances from Burhanpour and Agra, happens in lat. 26° 35′, lon. 75° 20′. This is the position of Agimere in the map: no great accuracy, however, with respect to its parallel, can be expected, where the authority is nothing more than a single line of distance, and that a very long one. The Ayin Acbaree is totally silent concerning its latitude and longitude. Col. Call, in a map of his, communicated by Mr. Hastings, places it in the parallel I have afsigned to it; and allows it to be distant from Burhanpour, 307 G. miles, and $192\frac{1}{2}$ from Agra; on what authority, I know not. Thevenot gives its latitude at $26\frac{1}{4}$°.

Agimere was the capital of the soubah of the same name, in Acbar's division of the empire, and is probably the *Gagasmira* of Ptolemy. It is built at the foot of a very high mountain; on the

top of which, is a fortrefs of very great strength. It is about 230 miles by the road, from Agra, and yet the famous Emperor Acbar, made a pilgrimage on foot, to the tomb of a saint, there; to implore the divine blefsing on his family, which at that time consisted only of daughters; but after this pilgrimage, he had three sons added to it. Jehanguire, his son and succefsor, occasionally kept his court here; and this occasioned the visits of Sir Thomas Roe to this place; as well as to Cheitore, and Mundu, which lay in the way to it, from Surat.

Ougein can hardly be regarded as a primary station, as it effects the position of one place only; that is, Mundu.

It is placed on the authority of a route traced by Capt. Reynolds, who accompanied Sir Charles Malet, on an embafsy from Bombay to Delhi, in 1784. Not knowing how far the distances were ascertained with precision, in this route, or whether the latitude of Ougein was, or was not taken, by Capt. Reynolds; I could only apportion the positions in the route, and Ougein amongst the rest, along the interval on my map, between Brodera, in Guzerat, and Budderwas, which occurs in Mr Smith's line between Narwah and Seronge. It happens that the interval, differs only one mile from the distance, on the route: and Ougein, placed after the manner just described, will be in lat. 23° 14′; lon. 75° 49′.

This survey of Capt. Reynolds, came to hand long after the construction of the map of Hindoostan, in 1788; in which Ougein was placed in point of longitude, on the reports of the computed distances from Brodera and Bopaltol: and in parallel, by the computed distance from Mundu, and Burhanpour. Its position was then, lat. 23° 26′; lon. 75° 56′: not very wide of the present one, considering the nature of the authorities. Amongst the lines of distance, was one from Brodera, taken from a book of routes, which was obligingly communicated by Capt. Kirkpatrick; and, together with some others, as obligingly translated from the Persian, for me, by Mr. David Anderson; whose services on the memorable occasion

of negociating the Mahratta peace, in 1782, and 1783, claim the united acknowledgments of Great Britain and Hindoostan. This route allowed 108 cofses between Brodera and Ougein; which distance is actually 109 by Capt. Reynolds's apportioned interval; at 42 to a degree. But if we take the distance on the map, between Bopal and Brodera, through Ougein, which occasions a considerable bend in the line, it will be found to be 247 G. miles: and the computation of cofses being 155 in Col. Camac's tables, the proportion will be about 37 to a degree; although the scale adopted for Malwa (in page 5), is 35 to a degree.

Capt. Reynolds's route must be regarded as a very capital one; being through a tract, which was heretofore the most vacant part of the map: and of which our general knowledge was so limited, that we supposed the courses of its rivers, to be to the south, and into the Nerbuddah; when, in fact, they were to the north, and into the Jumnah river. It settled also the position of Dhar, and of several other places, before unknown to us.

Mundu is placed in Capt. Reynolds's map, at 49 G. miles to the S W of Ougein: by D'Anville, 31½ S S W: and in a map of Col. Muir's, S ½ W, 36. Sir Thomas Roe, who paſsed through it, in his way from Burhanpour to Cheitore, reckoned it 66 cofses from Burhanpour, equal to 94½ G. miles. It is unlucky that the distance should be omitted in the march of Jehanguire, sent me by Capt. Kirkpatrick. There can be no doubt but that Mundu is more distant from Ougein, than either the map of D'Anville, or of Muir allows; but whether Capt. Reynolds's intelligence was accurate, I have no means of knowing. As far as I can collect from the march of Jehanguire, the distance cannot be more than 20 Acbaree cofses; say 39 G. miles. Nalcheh is said to be 6¾ cofses from Hasilpour: and the emperor appears to have made one stage from Dowlatabad, which is stated to be 11 or 12 cofses from Ougein: and allowing for the stage to Hasilpour 4, the total will be about 22: but as Hasilpour was evidently out of the road from

Ougein to Mundu, 20 cofses may pofsibly be a sufficient allowance for the direct distance. Nalcheh, is situated in the suburbs, or at the foot of the hill, of Mundu.

The cities of Ougein and Mundu are both of great antiquity. The former appears evidently both as to name and position, in the Periplus of the *Erythrean* sea, as well as in Ptolemy, under the name of *Ozene*. When the Ayin Acbaree was written, more than two centuries ago, Mundu (or Mundoo), was the capital of Malwa, and is described as a prodigious city, of 12 cofses, or 22 miles in circuit; and containing many monuments of ancient magnificence: but when it was visited by Sir Thomas Roe, in 1615, it was then fallen much to decay. It occupied the top of a very large and high mountain: few cities were ever placed in a bolder situation.

Ougein is the present capital of Madajee Sindia; who, with Tuckajee Holkar, pofsefses the principal part of Malwa. Holkar's capital is at Indore, or Endore, a modern city, which is said to lie about 20 cofses from Ougein, south, or south-eastwards. This is a part of Hindoostan, concerning which, we are but slightly informed; and of which, Sindia wished to keep us in ignorance: for it is said, he expreſsed a disapprobation of the brigade from Guzerat, taking its route through Ougein, in its way to the Bengal provinces: so that the detachment returned, nearly by the same road as it went, as far as Sirong.

Having now discuſsed the manner of establishing the *primary stations*, or those principal points, on which the general construction of the geography of the tract under consideration, depends; I shall proceed to give the detail of the manner, in which the intermediate spaces were filled up: but so great a variety of matter offers, that I hardly know where to begin; nor is it a point of much consequence: however, to preserve as much regularity as the subject is capable of, I shall begin on the western side, near Bombay; then go round by the north and east; and finish in the south.

When the map was constructed, which was previous to the arrival of any of Capt. Reynolds's inland surveys; I formed the geography of the tract between Bombay, Surat, and Poonah, from the best materials that I could procure: some of them, perhaps, of an indifferent kind; either from the want of leisure, or opportunity, in the collectors; or through apprehensions of raising dangerous suspicions in the minds of those, in whose power they were, at the time the observations were made. Such is the map of the road from Poonah to Nufsergur (or Nufseratpour) and round to Soangur, which was described by Mefsieurs Farmer and Stewart, during the time they remained as hostages in the Mahratta camp; the particulars of which were obligingly communicated to me by Mr. Farmer. This map ascertains the situations of Cafserbarry and Coondabarry Gauts; and, in particular, that of the city of Amednagur, once the capital of the soubah of the same name; but now better known by that of Dowlatabad. This city, which was the residence of the Emperor Aurungzebe, during his conquest of the Deccan and Carnatic, has generally been placed 50 miles to the south-east of its true position.

The road from Bombay to Poonah, is taken from a MS. map, made during the unfortunate campaign of 1778-9: collated with Mr. Smith's, and General Goddard's. And all the particulars along the coast, between Bombay and Surat, are also taken from General Goddard's map.

The road from Nimderrah Gaut to Aurungabad, and back to Bahbelgong, and thence by Chandor and Saler-Mouler, to Noopour; is from M. Anquetil du Perron. Chandor occurs in Mr. Smith's route; as well as Unkei-Tenki, which we meet with in Tavernier, and which enables us to join the routes together.

Such was the nature of the materials on which the ground-work of this part of the map was originally formed: but I have since introduced the routes of Capt. Reynolds, as far as it was poſsible to afsimilate the new matter with the old: and accordingly, a most in-

teresting route from Surat to Poonah, in which Nafsuck-Trimbuck, Sineer, Juneer, Sungumnere, &c. appear, is Capt. Reynolds's. Of his southern route from Poonah to the Kistnah river, we shall speak, in its place.

The south-east part of Guzerat is from a survey taken by order of the Bombay Government, collated with General Goddard's marches; and establishes among other points, that of Brodera, a principal fortrefs and town, in the north-east part of the tract lying between the rivers Tapty and Myhie: through which the great road leads from Surat to Ougein. Brodera lies in lat. 22° 15′ 30″; lon. 73° 11′. The road to Amedabad, is entirely from General Goddard: and the country round about it, as well as the peninsula of Guzerat, owe their present appearance in the map, to the information contained in that, made by the Bramin SADANUND; of whom we have spoken in page 186. This genuine Hindoo map, contains much new matter: and the Ayin Acbaree afsists in discriminating the valuable parts of it. In it is found the site of Mahmoodabad; in its turn, the capital of Guzerat, and founded by Sultan Mahmood, in the 11th century. The Ayin Acbaree describes the walls of it, as including a vast extent of ground; and speaks of it rather as an existing city, than as a place in ruins. This was in the latter part of the 16th century. Junagur, or Chunagur, a city and fortrefs in the heart of the peninsula, and a subject of Ferishta's history; together with many other positions, are pointed out, or illustrated, by this map; which, as we have said before, is the production of a native of Guzerat. Without a particular account of its author, one might have rested satisfied with its containing a great variety of particulars, although not arranged in geographical order: but it is remarkable, that it gives the form of Guzerat with more accuracy, than the European maps could boast of.

It does not however, clear up the ambiguity that has long existed, concerning the lower part of the course of the Puddar river: nor

am I yet informed whether that river discharges itself into the head of the gulf of Cutch, by one channel; or whether it forms several channels, and discharges itself through the many openings that present themselves, between the head of the gulf of Cutch, and the Indus. One thing only, we are certain of by means of this map; and that is, that one large river (or branch of a river) falls into the head of the gulf of Cutch; and that it appears to be the same river that has its source in the S W part of Agimere, and which is named by Europeans, the Puddar. The river that opens into the head of the gulf of Cutch, is named in the MS. map, *Butlafs*; taking its course by Sirowy, Palhanpour, and Radunpour (or Radimpour). The Ayin Acbaree does not enumerate among the rivers of Guzerat, or Agimere, either the Puddar, or Butlafs. It is more extraordinary that the Puddar should not be taken notice of, as the Ayin Acbaree describes an extensive tract of low fenny land, on the west of Amedabad, and which was periodically overflowed by the mouth of a river; when that very river is what we name the Puddar. It is certain that the name occurs only in D'Anville.* Tavernier takes no notice of it, in his route from Amedabad to Agra, although he must have croſsed it. Poſsibly the word *Puddar*, may be no more than an appellative; or may be the same as *buddar*, or *budda*, in Soane-budda, and Ner-budda: and the proper name of the river, Butlafs, may have been omitted.

The peninsula of Guzerat is about 200 miles in length, and 140 wide, formed by the Arabian sea (called by the Asiatics the sea of OMMAN) and the gulfs of Cambay and Cutch; both of which penetrate far within the continent, as the dimensions of the peninsula shew. By the numerous subdivisions of this tract, and more by the sum of its revenue, in the Ayin Acbaree, we are led to consider it as of very great importance, in the opinions of the Moguls. Surat

* Since the above was written, I found the same name in a map of Persia, *drawn and engraved* at Constantinople, in the year 1729. The names are in Arabic: the scale between six and seven-tenths of an inch to a degree.

too, that great emporium, situated in its vicinity, had its share in raising the value of the natural products of it, among which, cotton is the staple article. Being a frontier province, as it respects the accefs by sea, Guzerat contains a greater mixture of races, and a greater variety of religions, than any other province. The Ayin Acbaree says, " From the liberality of his majesty's (Acbar's) " disposition, every sect exercises its particular mode of worship, " without molestation." What a happy change since Mahmood, in the 11th century; whose principal delight was the destruction of Hindoo temples! The famous pagoda of Sumnaut, which was destroyed by Mahmood, stood within the peninsula, of which we have been speaking; and its particular site is pointed out by circumstances, in the Ayin Acbaree, and Ferishta. For the former says, " Puttan on the sea shore, is also called Puttan Sumnaut." And the latter, " it was situated upon the shore of the ocean, and " is at this time to be seen in the DISTRICTS of the harbour of DEO " (Diu) under the dominion of the idolaters of Europe." This appears to refer plainly to Diu, in the hands of the Portuguese: and a town of the name of Puttan, is about 30 miles to the N W of Diu; and on the sea shore: but this Puttan has *Billowell*, or *Velloul*, prefixed to it. Several particulars, in the Ayin Acbaree, prove that Sumnaut is nearer to Diu point, than to that of Jigat; where M. D'Anville placed it. It was near the river Sirsooty, and in the *second*, or Puttan division of Guzerat. Mangalore (or Mangarole), and Joorwar (or Choorwar), were in the same division with Sumnaut; and these places, in Sadanund's map, are in the quarter towards Diu. Lastly, Jigat, or Jugget, which includes the pagoda and point of that name, is reckoned the *fifth* division of Guzerat. (Ayin Acbaree, Vol. II. page 81, to 88.)

The ancient city of Nehrwaleh, the capital of the country of Guzerat, or rather perhaps of a kingdom, of which Guzerat only constituted a part, in the 12th century, has hitherto been misplaced; though M. D'Anville's idea came the nearest to it.

He supposed it to have stood where Amedabad does (Eclaircifemens, page 74.); but the fact appears to be, that Puttan, or Pattun, situated in the north part of Guzerat, near the river Puddar, and on a branch of it, named Suruswutty, stands on the site of Nehrwaleh. The information came from my friend Capt. Kirkpatrick; and it will be found that the notices concerning it, in Edrisi, and in the Ayin Acbaree, convey the same information. The tables of Nasereddin and Ulug Beig, give its latitude (Nehelwara) at 22 degrees; but it is nearer 24°.

Ferishta, in his History of Hindoostan, mentions it as a city of Guzerat. Sultan Mahmood, in 1022, paſsed through it, in his way to Sumnaut; and found its situation so pleasant and so convenient, that he conceived a design of making it his capital. Ferishta, in another work, after mentioning Nehrwaleh, adds, "better known in these days, by the name of Puttan." Shahnawaz also, giving an account of the death of the great Byram (Acbar's minister), says that it happened at Puttan, "anciently called Nehrwaleh."* Edrisi, at a later period than that of Sultan Mahmood's invasion, speaks of it under the name of *Nabroara*, situated at eight journies from Baruh (or Baroach). The road lay through an open country, free from hills; and the towns or cities of *Hanaïel* and *Dolca*, both of which stood near the foot of the mountains, that lay to the north-east; occurred in this road. Hanole, appears in the route from Brodera to Ougein, mentioned in page 220; and the fortreſs of *Paygurrab*, on a hill, three coſses to the right (*i. e.* to the south-eastward); with the distance of 14 coſses from Brodera, to the N E; mark it to be the place in Capt. Reynolds's route named Halole; near the foot of the mountains of Champaneer. In point of general situation, it lies about N N E $\frac{1}{2}$ E from Baroach; and at the distance of more than three journies. We find

* Kirkpatrick's MSS.

Halole, also in Sadanund's map, in nearly the same position: as well as *Dolaue*, in the line of the route from Baroach to it; which may poſsibly be the *Dolca* of Edrisi. Hanole, however, cannot well be any other than his Hanaûel, by the position.

Puttan, or Pattun, bears to the west of north from Baroach, according to the ideas of Capt. Reynolds, and Sadanund: and in distance by the former, about 134 G. miles; full eight journies of ordinary travellers, from Baroach, through Hanole. The bend of the road to the N E, through Hanole, is easily accounted for: it was to avoid the tides in the rivers that fall into the gulf of Cambay (*Sinus Barygazenus*), and more particularly that of Myhie, a large river that falls in, at the head of the gulf; the paſsage of which is rendered very uncertain, and dangerous, by reason of the *bores*. In the present times, the Myhie is croſsed 30 or 40 miles above its mouth, and far out of the line of the road, between Baroach and Amedabad, to avoid this danger. Therefore, we may conclude, that the communication between the capital (Nehrwaleh) and its port (Baroach), was by a road, that was at all times practicable; for it is said, that *there was a carriage road between them* (Edrisi, p. 62). And here it will be proper to mention, that the Ayin Acbaree (Vol. II. p. 76.) describes a road of 100 coſses (190 road miles) long, leading from *Puttan* to *Berodeb*. I rather suppose that Baroach should be read for Berodeh (or Baroda); for the distance will agree much better to that. The Ayin Acbaree also says (page 77), that Puttan was *at first* the seat of government; then Champaneer; and last of all Amedabad.

A very curious particular relating to Nehrwaleh, is, that its king was styled BALHARA, or King of Kings; from which title, we might infer, that the rest of the Indian princes, his neighbours, acknowledged him in some degree, as their superior. Both Edrisi, and Masoudi, mention this circumstance. Ptolemy's *Baleocur* may probably mean the capital of the same kingdom, though

somewhat misplaced. It is remarkable also, that Edrisi mentions the worship of the idol *Bodda*, or *Bud*, by the people of Nahroara.*

Although the gulfs of Cambay and Cutch penetrate so deeply within the land, yet so far from rendering the sea smoother, or the navigation safer, they occasion such high and rapid tides, and are so thickly sown with sand-banks, that few places are more dangerous. The *bore*, which means the flood tide, rushing in suddenly, and forming a body of water, elevated many feet above the common surface of the sea; and of course levelling every obstacle that opposes it; rages here with great violence: covering in an instant the sand-banks, which before appeared dry and firm. I have accounted for the terror with which Alexander's followers were struck, at the mouth of the Indus, from this dreadful phenomenon. See the Introduction, page xxiv.

Capt. Joseph Price had the misfortune to be carried up to the head of the gulf of Cutch, by pirates; who captured his ship, after a most gallant and obstinate defence, of two days: but he was afterwards treated with great respect and tenderneſs, and permitted to depart by land, for Bombay. He accordingly traversed the isthmus, to Gogo; and reports, that the country in that tract, is generally flat; having only a few eminences, and those fortified. The soil is dry and sandy, as is common to Guzerat in general; for, as the author of the Ayin Acbaree says, the rain there does not occasion mud. This may be inferred from the nick-name of *Gurdabad*, or dust-town; bestowed on Amedabad, by Jehanguire: who (by the bye) appears to have taken a wonderful dislike† to a situation that has been much praised by other travellers.

* Baroach has been, in different ages, a port common both to *Nehrwaleh* and *Tagara*: of which last, the author of the Peripius of the Erythrean sea, makes particular mention. The former was eight journies, the latter ten, from Baroach. Tagara should be in the Deccan, according to the Periplus: though I think it furnishes no ideas that enable us to form a judgment, even of its general situation. Ptolomy places it nearer the position that answers to Burhanpour, or its neighbourhood, than any other.

† Kirkpatrick's MSS.

The road from Amedabad to Agimere, by Meerta, is chiefly from a map constructed by Col. Call, and communicated by Mr. Hastings. To this I have added Tavernier's particulars of the road, as he travelled this way from Amedabad to Agra. I know not from whence Col. Call had his particulars, but they appear to be perfectly new. Tavernier's distance is enormous, according to the scale of the coſs; but it is to be considered, that the road is very circuitous, and no leſs mountainous; so that no rule can well be applied, for reducing the road distance, to a straight line.

The positions of Agimere, Jaepour, and Ougein, have been already discuſsed, as well as the places situated in the line of Mr. Smith's route. The space included between these points, and which is chiefly situated in the soubah of Agimere, has undergone a very considerable improvement in its geography, since the publication of my last map; by the contributions of Mr. Hastings, Mr. Bensley, and Col. Popham. I know not who the authors of the several maps in question were; they have, however, my acknowledgments for the aſsistance I have received from them: and I grieve to reflect, that some of the personages who furnished the most interesting matter towards the improvement of this work, have not lived to be witneſses of the succeſs of their labours. The tract in question includes, among others, the provinces of Cheitore, and Oudipour, subject to the Rana, or chief prince among the Rajpoots; and the antiquity of whose house may be gathered, by the name *Rhanmæ*, appearing in Ptolemy, nearly in its proper position, as a province. The province of Agimere in general has ever been the country of Rajpoots; that is, the warrior tribe among the Hindoos, and which are noticed in Arrian, and Diodorus: and Cheitore, or Oudipour (which I consider as synonymous), is, I believe, reckoned the first among the Rajpoot states. The whole consists, generally, of high mountains divided by narrow valleys; or of plains, environed by mountains, acceſsible only by narrow paſses and defiles: in effect, one of the strongest countries in the world;

yet having a sufficient extent of arable land: of dimensions equal to the support of a numerous population; and blefsed with a mild climate; being between the 24th and 28th degrees of latitude: in short, a country likely to remain for ever in the hands of its present pofsefsors; and to prove the asylum of the Hindoo religion and customs. Notwithstanding the attacks that have been made on it, by the Gaznavide, Patan, and Mogul emperors, it has never been more than nominally reduced. Some of their fortrefses, with which the country abounds, were indeed taken; but THE SPIRITS OF INDEPENDENT NATIONS, DO NOT RESIDE IN FORTRESSES; nor are they to be conquered, with them. Accordingly, every war made on these people, even by Aurungzebe, ended in a compromise, or defeat, on the side of the aſsailants.

Cheitore was the capital of the Rana in the days of his greatnefs. It was a fortrefs and city of great extent, situated on a mountain; but has been in ruins since the time of Aurungzebe in 1681: and had once before experienced a like fate from the hands of Acbar, in 1567. The position of this place, is inferred from the account of Sir Thomas Roe, who made it 105 cofses from Mundu, and 51 from Agimere. From this I have been led to place it in lat. 25° 21′, lon. 74° 56′. The different MS. maps, give its position more to the west; and indeed, one of them, so far as to throw it near the great road from Amedabad to Meerta. The cause of this, is a mistake in the difference of longitude between Agra and Guzerat, which has been reckoned too much in these MSS. Cheitore, placed as above, is only about 181 G. miles on the west of Narwah: Mr. Hastings's MS. map gives this distance at 196; Col. Popham's at 195; Col. Muir's at 193; and a map of Malwa 231. All but the last, aſsign it the same parallel as Narwah: while my construction places it 19 minutes more southwardly: the map of Malwa, alone places it 18′ south of Narwah. Mr. Hastings's copy agrees with the construction, in making it bear about S S W from Agimere; but shortens the distance about 6 cofses.

Rantampour, a very celebrated fortrefs in the Indian histories, is situated in the eastern quarter of Agimere, and has its position from the same MSS.: and in the S E quarter of the same soubah, many other noted fortrefses and residencies of rajahs, are extracted from the same MSS.; afsisted by Col. Camac's tables of routes: such as Kotta, Boondi, Gandhar, Thora, Suisopour, Sandri, Mandelgur, &c. And in Marwar, or the north division of Agimere, Nagore, Bicaneer, Catchwana, Didwanah, Samber, &c. &c. The upper part of the courses of the Chumbul, Sinde, and Sepra rivers, appear now, for the first time, in some sort of detail; though it must be long, ere the geography of parts so remote from our eftablishments and influence, can be in any degree correct: and the reader will pardon his being reminded, that the geography we are treating of, includes an extent equal to one half of Europe.

The Ayin Acbaree has furnished some new ideas respecting the division of the soubah of Agimere. It consisted at that time of three grand divisions, Marwar, Meywar, and Hadowty (or Nagore); and these contained seven circars or subdivisions, Agimere, Cheitore, Rantampour, Joudypour, Sirowy, Nagore, and Beykaneer (or Bicaneer). Marwar, as including the circar and fortrefs of Agimere, has grown almost synonymous with Agimere, in common acceptation. The extent of this province, as given by the same book, is 168 cofses, or about 320 B. miles, from east to west; and 150 cofses, or 285 B. miles, from N to S: and its extent on the map, justifies this account. Such is the province of the Rajpoots. From the indulgence granted to this tribe throughout India, namely, that of feeding on goats' flesh, I think it may be inferred, that the custom originated in this mountainous country. The grain cultivated there, is chiefly of the dry kind. The taxes amounted (in the time of Acbar) to no more than a seventh, or eighth, of the produce of the harvest.

We come next to the Gohud and Narwah provinces, between the Chumbul and Sinde rivers. Much of this tract was described

by Mr. Cameron, in a map communicated by the late Col. Camac: but even a province equal to one of the largest English counties, is lost in such a map, as the one under consideration. Beyond this, on the east and south-east, to the Betwah river, is filled up chiefly with Col. Camac's information. Between that river, and the Nerbuddah, the Persian book of routes (see page 220) furnishes the road between Callinger and Bilsah, and becomes interesting by its leading through Sagur (the *Sageda*, of Ptolemy), a capital fortrefs and town, situated on a branch of the Cane river, about 55 G. miles to the eastward of Bilsah. This route was also translated by Mr. Anderson. It gives only 78 cofses between Bilsah and Pannah (or Purna, the famous diamond mine of Bundelcund, and supposed to be the *Panafsa* of Ptolemy); which, I should apprehend, was a mistake; as the distance, on a straight line, is 165 G. miles. Sagur, however, being stated at 26 cofses from Bilsah, a known point, does not allow of being far misplaced, by an error in the scale.

Bilsah is placed, by a route of Col. Camac's, leading from Sirong to Bopal; and being confined by these points on two sides, and by the routes of Goddard and Smith, on the others; it cannot be far out of its place. Bilsah, which is almost in the heart of India, affords tobacco of the most fragrant and delicate kind, throughout that whole region; and which is distributed accordingly.*

Chanderee, and other places along the course of the Betwah, are either from Col. Camac's routes, or Col. Muir's map. Chanderee is a very ancient city, and within the province of Malwa. The Ayin Acbaree says, "there are 14,000 stone houses in it." It

* A difference of opinion seems to have prevailed, for some time, whether tobacco came originally from Asia or America. It is so universally difseminated over Hindoostan and China, and appears to have been in use so long in the former, that it is not regarded by the common people, otherwise than as indigenous. However, it is now ascertained, very satisfactorily, that it was carried thither by the Portuguese: for there are in existence, copies of certain prohibitory edicts concerning it, iffued by the Mogul emperors: and in those, tobacco is mentioned, as "*a pernicious plant, introduced by Europeans.*" It is mentioned by Olearius, as a plant in common cultivation in Persia, about the year 1638.

is now, like most of the ancient cities of Hindoostan, fallen into decay; but is still the residence of a principal rajah. The routes in the central parts of Malwa, are from Col. Muir's map: Hindia, is from Tavernier, supposing it was meant by *Andi*. It is astonishing how he could so far mistake the course of the Nerbuddah at that city, as to suppose it ran into the Ganges. It seems to be the *Inde* of Ptolemy.

A Hindoo map of *Bundela*, or Bundelcund, including generally the tract between the Betwah and Soane rivers, and from the Ganges to the Nerbuddah; was obligingly communicated by Sir Charles Boughton Rouse, who also translated the names in it, from the Persian. This map points out several places that I had not heard of before, and afsists in fixing many others, of which I had been only partially informed.

The country between Mirzapour and the heads of the Soane and Nerbuddah, was explored by Major William Bruce, who so eminently distinguished himself at the escalade of Gwalior, in 1780.*

* The circumstances attending this capture are so very curious, that I cannot help inserting them here, though confefsedly out of place. They are extracted from the printed account of GWALIOR, which accompanies a beautiful engraved view of that fortrefs, published in 1784.

"The fortrefs of Gwalior stands on a vast rock, of about four miles in length, but narrow, and of unequal breadth; and nearly flat at the top. The sides are so steep, as to appear almost perpendicular in every part; for where it was not naturally so, it has been scarped away: and the height from the plain below, is from 200 to 300 feet. The rampart conforms to the edge of the precipice all round; and the only entrance to it, is by steps running up the side of the rock, which are defended, on the side next the country, by a wall and bastions; and farther guarded by seven stone gateways, at certain distances from each other. The area within, is full of noble buildings, reservoirs of water, wells, and cultivated land; so that it is really a little district in itself. At the N W foot of the mountain is the town, pretty large, and well built; the houses all of stone. To have besieged this place, would have been vain; for nothing but a surprise, or blockade, could have carried it.

"A tribe of banditti, from the district of Gohud, had been accustomed to rob about this town; and once, in the dead of night, had climbed up the rock, and got into the fort. This intelligence they had communicated to the Rana, who often thought of availing himself of it, but was fearful of undertaking an enterprize of such moment, with his own troops.

"At length, he informed Col. Popham of it; who sent a party of the robbers to conduct some of his own spies to the spot. They accordingly climbed up in the night, and found that the guards generally went to sleep, after their rounds. Popham now ordered ladders to be made, but with so much secresy, that, until the night of the surprise, a few officers only knew it. On the 3d of *August*, 1780, in the evening, a party was ordered to be in readinefs to march, under the command of Major Bruce; and Popham put himself at the head of two battalions, which were immediately to follow the storming party. To prevent as much as posible, any noise in approaching or ascending the rock, a kind of shoes, of

During his expedition, he verified a fact which had been long doubted, though strenuously insisted on by the natives; (viz.) that the Soane and Nerbuddah rivers had their common source from a pond, or lake, on the southern confines of the Allahabad province. These rivers do literally flow from the same lake; making, conjointly with the Ganges, an island of the southern part of Hindoostan: and flowing in opposite directions 1500 miles. The course of the Nerbuddah river is ascertained, only in certain points where it happens to be crofsed by any of the great roads here described: excepting only in the neighbourhood of Baroach. All the intermediate parts are drawn from report. It is represented to be as wide at Hufsingabad Gaut, as the Jumnah is at Calpy: but fordable in most places, during the dry season.

We learn from Mr. Ewart, that the Soane is named Soane-budda, by the people who live near the upper part of its course; as its sister river is named Ner-buddah. The upper part of the course of

woollen cloth, were made for the sepoys, and stuffed with cotton. At eleven o'clock, the whole detachment marched from the camp at Reypour, eight miles from Gwalior, through unfrequented paths; and reached it a little before day-break. Just as Bruce arrived at the foot of the rock, he saw the lights which accompanied the rounds moving along the rampart; and heard the centinels cough (the mode of signifying that *All is well*, in an Indian camp, or garrison); which might have damped the spirit of many men, but served only to inspire him with more confidence; as the moment for action, that is, the interval between the paffing of the rounds, was now ascertained. Accordingly, when the lights were gone, the wooden ladders were placed against the rock, and one of the robbers first mounted, and returned with an account that the guard was retired to sleep. Lieut. Cameron, the engineer, next mounted, and tied a rope-ladder to the battlements of the wall; this kind of ladder, being the only one adapted to the purpose of scaling the wall in a body (the wooden ones only serving to ascend from crag to crag of the rock, and to afsist in fixing the rope-ladder). When all was ready, Major Bruce, with twenty sepoy grenadiers, ascended without being discovered, and squatted down under the parapet; but before a reinforcement arrived, three of the party had so little recollection, as to fire on some of the garrison who happened to be lying asleep near them. This *had nearly ruined* the whole plan: the garrison were, of course, alarmed, and ran in great numbers towards the place; but ignorant of the strength of the afsailants (as the men fired on, had been killed outright), they suffered themselves to be stopped, by the warm fire kept up by the small party of grenadiers; until Colonel Popham himself, with a considerable reinforcement, came to their aid. The garrison then retreated to the inner buildings, and discharged a few rockets, but soon afterwards retreated precipitately through the gate; while the principal officers, thus deserted, afsembled together in one house, and hung out a white flag. Popham sent an officer to give them afsurances of quarter and protection; and thus, in the space of two hours, this important and astonishing fortrefs was completely in our pofsefsion. We had only 20 men wounded, and none killed. On the side of the enemy, Bapogee, the Mahratta governor, was killed, and most of the principal officers were wounded."

the Soane, is drawn in the same manner as the Nerbuddah is described to be; and the fortreſs of Bandoo-gur, near it, is from the information of Mr. Ewart.

The *data* for the positions of Nagpour and Ruttunpour, are already given in pages 216 and 218, in the diſcuſsion of the primary ſtations. Many roads lead from each of these places; but two only were meaſured: one from Chittra in Bahar, through Ruttunpour, to Nagpour; the other from Nagpour, through Gurrah, to Rewah, and Mirzapour, on the Ganges. The firſt, by determining ſeveral points, ſuch as Surgoojah, Dongong, Kyragur, &c. enabled me to correct ſome of Col. Camac's eſtimated routes; and the latter, beſides giving the poſition of Gurrah, the capital of Gurry-Mundella; aſsiſted in ſettling Mundella, and Deogur. The eſtimated routes from Nagpour, were to Ellichpour, Burhanpour, Narnalla, Gawille (or Gyalgur), Aurungabad, Jaffierabad, Mahur, Notchengong, Neermull, Chanda, and Manickdurg; all collected by Mr. Ewart. All theſe proved very ſatisfactory, as they correſponded with the diſtances of the ſeveral intervals: and Nagpour being determined with the preciſion requiſite for a general map, there is little doubt but that all the places between Bengal and Bombay, are placed within a few miles of their reſpective poſitions: that is, admitting the longitude of Bombay to be right, in reſpect of Calcutta.

Beſides the routes collected by Mr. Ewart, Mr. Watherſtone obligingly communicated his route from Huſsingabad Gaut, on the Nerbuddah, to Nagpour. He was ſent thither on buſineſs of the higheſt political importance, by General Goddard; whoſe army was then encamped on the banks of the Nerbudda, in the courſe of its celebrated march acroſs the continent.* His journey pointed

* In juſtice to General Goddard's memory, I think it incumbent on me to obſerve, that the author of the Hiſtory of Hyder Ally (publiſhed in 1784), though ſeemingly inclined to compliment him, has depreciated the merits of the undertaking, by over-rating the numbers and quality, of General Goddard's troops. M. D. L. T. ſtates the ſtrength of the army at 8000; of which, ſays he, 1200 were EUROPEANS. The truth is, that the detach-

out, among other particulars, the source of the Tapty (or Surat river), whose spring is more remote than we had an idea of. It rises at Maltoy, a town situated 42 cofses to the N W of Nagpour: so that its course is full two-thirds of the length of that of the Nerbuddah. The distance between Hufsingabad and Nagpour, is 100 cofses.

Ellichpour is a fine city, and was anciently the chief city of Berar *proper*; by which I mean to distinguish the province known in the Ayin Acbaree, by that name: for our modern acceptation of Berar, includes the whole country between Dowlalabad and Orifsa; the eastern part of which, was neither reduced by Acbar, nor even known, in particulars, to the author of the Ayin Acbaree. At present, Ellichpour is the capital of a large province or district, subject to the Nizam; but paying a chout, or nominal fourth part of its revenues, to Nagpour.

Deogur, or Deogire,* was anciently a capital city, and the residence of the Rajah of Goondwaneh; or, as he is called in the Ayin Acbaree, the Goond Rajah; the Nerbuddah being then the southern limit of Hindoostan. This province appears to be one of the most elevated in Hindoostan, seeing that the rivers Tapty, Bain, and Nerbuddah, descend from it. Malwa, is unequivocally the highest; for there, the rivers descend in every direction.

Golam Mohamed's routes, being added to those collected by Mr. Ewart, contribute much towards the improvement of the map, in the interval between the measured lines by Mr. Ewart: and before we were favoured with that gentleman's most valuable materials (which entirely supersede the former as far as they go), Golam Mohamed's contributed largely towards the geography of the

ment consisted of 123 European commissioned officers, and 6624 native troops of all denominations; and without a single corps of Europeans. In the *return* from whence this was copied, the servants and followers of this little army, amount to no lefs a number than 19,779: besides the *bazar*, or market people, not included in the return: and these are estimated at 12,000 more: in all, more than four followers to each fighting man.

* This must not be confounded with a city of the same name, which stood near the site of Dowlatabad.

country round Nagpour.* These we owed to the late Col. Camac, who, to his praise, employed a part of his leisure time, during his command on the western frontier of Bahar, in inquiries concerning the state of politics, government, geography, and nature of the countries included in the abovementioned tract: the geography of which had, till then, been very little known to us.

Sumbulpour, or Semilpour, is determined by its reputed distance from Ruttunpour, and from four different points in the Bengal survey; from routes collected by Col. Camac. Unluckily, I had placed Sumbulpour in the map, as it now stands, before I had seen Mr. Ewart's papers; by which it appears to be ten or eleven miles to the south-west of its true position; being in 21° 25′ lat. and 83° 40′ lon.; when it ought to be in 21° 34′ 30″, and 83° 46′ 30″. Had this new position been established on the same principle as Nagpour and Ruttunpour; that is, mathematically; I should not have scrupled to eraze a large portion of the map, to gain so desirable an advantage: but as it yet rests on computed distances, I am content to point out the error in this manner.

The distance of Sumbulpour from Ruttunpour, which is hardly affected by the new matter, is by one account *53* cofses; and by another *56*: the mean, $54\frac{1}{2}$ cofses, or 78 G. miles, is the distance adopted.

Then, Sumbulpour is from	Doesah in Bahar -	91 cofses
———	Nowagur in Bahar -	59
———	Raidy in Bahar -	67
———	Beurah in Bahar -	41

All these places being nearly in one line of direction from Sumbulpour, admit of a mean being struck between them: and this

* The number of estimated cofses between Burwah and Nagpour, was 196, and from thence to Aurungabad, $163\frac{1}{2}$; total $359\frac{1}{2}$. And the distance on the map is $517\frac{1}{2}$ G. miles; which is nearly equal to the above number of cofses.

mean appears to be 66½ from Raidy, or 95 G. miles. The intersection of these lines of distances, from Ruttunpour and Raidy, is nearly at right angles; and they meet, as is said above, in lat. 21° 34′ 30″, lon. 83° 46′ 30″. This position falls out 142 G. miles from Cattack; and Mr. Motte, who traced this road, together with the course of the Mahanada, in 1766, made the distance 129: he also reckoned 51′ difference of latitude, and it appears to be 61½.

The lower road from Nagpour to Sumbulpour, through Raipour, is from Golam Mohamed; and the upper, by Dumdah and Soorangur; is Mr. Thomas's; communicated by Mr. Ewart. The lower route, which is checked, laterally, by the distance of Raipour from Ruttunpour, points out also the course and navigable part of the Mahanuddy, or Mahanada river. Arung is the furthest point to which it is navigable, from the sea. The upper road crosses it near the conflux of the Hutsoo river, which is also navigable, to Dungong. By the deviation of the road between Nagpour and Soonpour, from the true line of direction towards Cattack, it may be inferred that the country on the south of it, is either desert, or in an uncivilized state. We are, however, not well informed on this point, but have every reason to suppose it; and the rather, as Mr. Thomas mentions Dewancole, near Soonpour, as a retreat of banditti.

Soorangur, where the roads divide to Sumbulpour, and Soonpour, is the burial place of the late Mr. Eliott; who died on his way from Calcutta to Nagpour, in October, 1778. At that crisis, when the fate of the British empire in India, hung suspended by a slender thread, this gentleman was sent by Mr. Hastings, on an embassy to the court of Nagpour; which at that time, might be said to hold the balance of power, in Hindoostan. Zeal for the public good, prompted him to undertake a service of great personal danger; and which eventually occasioned his death. Mr. Hastings caused a monument to be erected to his memory, on the spot: and also commemorated his early genius and attainments, and no less

early death, in some lines, which make part of an imitation of an ode of Horace.* Soorangur is about 270 road miles short of Nagpour, and 470 from Calcutta; and lies out of the direct road.

I observed above, that Sumbulpour is misplaced; and this occasioned an error in all the places between Ruttunpour and Cattack. For the distance between Soorangur and Soonpour is too small; and between the latter and Cattack, too great; the Mahanada not making so deep a winding or elbow, between Boad and Sumbulpour, as Mr. Motte described, and as it is represented in the map. Golam Mohamed reckoned only 137 cofses between Nagpour and Sumbulpour: but the construction will not allow of lefs than 157; which is a mistake not easily to be accounted for.

Boad, a fort near the Mahanada, is said by Col. Camac to be 40 cofses only, from Gumsoar, in the Ganjam district: by constuction it is 46; which difference is probably occasioned by the mistake in the position of Sumbulpour. On the west of Boad, and near the Mahanuddy river, Mr. Thomas paſsed a town of the name of Beiragur, which I take to be the place noted in the Ayin Acbaree, as having a diamond mine in its neighbourhood. There is indeed, a mine of more modern date, in the vicinity of Sumbulpour; but this whole quarter must from very early times have been famous for producing diamonds. Ptolemy's *Adamas* river answers perfectly to the Mahanuddy: and the district *Sabaræ*, on its banks, is said to abound in diamonds. Although this geographer's map of India, is so exceedingly faulty, in the general form of the whole tract; yet several parts of it, are descriptive. When we perceive the head of the river just mentioned, placed among the Bundela hills, and Arcot

* An early death was ELIOT's doom,
I saw his op'ning virtues bloom,
And manly sense unfold;
Too soon to fade! I bade the stone
Record his name 'midst hordes unknown,
Unknowing what it told.
HOR. Book II. Ode xvi.

[See the New Annual Register for 1786.]

thrust up, into the middle of India; we ought to reflect, that Ptolemy's ideas were collected from the people who sailed along the coast, and who described what they had seen and heard, without regard to what lay beyond it: and moreover, made use of too wide a scale; as commonly happens, when the sphere of knowledge is confined, and the geographer works *ad libitum*, from the coast, towards the interior of an unknown continent. Whoever consults Ptolemy's map of India, should carry these ideas in his mind: that the construction of it is founded on three lines; one of which, is that of the whole coast, from the gulf of Cambay, round to the Ganges; a second, the course of the Indus, and the gulfs of Cutch and Cambay; and the third, the common road from the Panjab to the mouths of the Ganges. The objects within these lines, have a relative dependence on each line, respectively; and are invariably placed at too great a distance within them: it therefore happens, that an object which should have occupied a place near one of the lines, is thrust towards the middle of the map; and this being a general case, places on opposite sides of India, are crowded together, as Arcot and Sagur *(Sagbeda)* are. At the same time, the central parts are wholly omitted; as being, in reality, unknown. Some may treat with ridicule, what I have said on the score of PTOLEMY: but a work which has travelled down to us from the second century of our æra, must have poſseſsed something worthy to recommend it, and to keep it alive: and at least merits an explanation.

Mr. Motte's route along the Mahanuddy, was described from computed distances, and bearings by a compaſs. He also took the latitude of Sumbulpour, in a rough manner, and made it nearly the same as that of Balasore; that is, about 21 degrees and a half. The mouths of this river, which form an aſsemblage of low woody islands, like the Ganges, and many other rivers; have never been traced, but are described from report only. At the mouth of the

principal channel, near False Point, is a fortified island, named Cajung, or Codjung.

This brings us into the neighbourhood of the Chilka lake, which bounds THE CIRCARS (or NORTHERN CIRCARS) on the north. This lake seems the effect of the breach of the sea, over a flat, sandy shore, whose elevation was something above the level of the country within. Pulicat lake appears to have the same origin. Both of them communicate with the sea, by a very narrow but deep opening; and are shallow within. The Chilka lake is about 40 miles in length from N E to S W; and in most places 12 or 15 wide; with a narrow slip of sandy ground, between it and the sea. It has many inhabited islands in it. On the N W it is bounded by a ridge of mountains; a continuation of that, which extends from the Mahanuddy to the Godavery river; and shuts up the circars towards the continent. The Chilka, therefore, forms a pafs on each side of it, towards the Cattack province. It is described from the observations of Mr. Cotsford, and of Capt. Campbell: though, pofsibly, the extent of it may be somewhat more than is given, towards the north. It affords an agreeable diversity of objects: mountains, islands, and forests; and an extended surface of water, with boats and small vefsels sailing on it. To those who sail at some distance from the coast, it has the appearance of a deep bay; the slip of land not being visible.

The famous pagoda of Jagarnaut, lies a few miles to the eastward of this lake, and close on the sea shore. It is a shapelefs mafs of building: and no otherwise remarkable, than as one of the first objects of Hindoo veneration; and as an excellent sea-mark, on a coast which is perfectly flat, and exhibits a continued sameneſs; and that in a quarter, where a discriminating object becomes of the highest importance to navigators. It has no claim to great antiquity: and I am led to suppose, that it succeeded the temple of

Sumnaut in Guzerat; which was destroyed by Mahmood in the 11th century. Pofsibly the remote situation, and the nature of the country near it (which, on the side of Hindoostan *proper*, is shut up by mountains and deep rivers), might recommend the spot, where Jagarnaut is situated: for we find Orifsa was not an early conquest.

The circars are described from various authorities. The construction of the sea coast has already been discufsed in the first Section. Our pofsefsions in this quarter, extend no where more than 50 B. miles inland; and in some places not more than 20; between the Chilka lake, and the Godavery river: and between this river and the Kistnah, about 70 or 75. So that the circars form a slip of territory, bounded on one side by the sea; and on the other, generally, by a ridge of mountains, that runs nearly parallel to it. Col. Pearse's line, runs entirely through this tract; and may be considered, in our geography, as the foundation, on which a superstructure has been raised, by the labours of many different people. The district round Ganjam, known by the name of Itchapour, and which is one of the divisions of the Cicacole country; is drawn from Mr. Cotsford's very elegant map. The Tickly district, adjoining to it, on the south, is chiefly from Lieut. Cridland's surveys; and extends to Cicacole town (the *Cocala* of Ptolemy). From Cicacole, to Visagapatam, including the country to the foot of the mountains, is taken from an old MS. map of Mr. Dalrymple's: and from thence to Rajamundry, is taken from a map of Col. Forde's marches, collated with Montresor's large map, at the East-India House. It is all along to be understood, that Col. Pearse's line (corrected as in page 10), forms the scale of the parts in question. The remaining part of the circars, that is, between the Godavery and Kistnah rivers; is chiefly taken from a map of that country, published by Mr. Dalrymple: the groundwork of which is composed of the late Major Stevens's materials.

The routes to Joypour and Badrachillum, are on the authority of Mr. Claud Rufsell; and the position of the latter place, which is very near to the Godavery, accords with Mr. Montresor's idea, as expreſsed in his large map.

The Godavery river, or Gonga Godowry (sometimes called the *Gang* in Ferishta's History), was, till very lately, considered as the same with the Cattack river, or Mahanuddy. As we had no authority, that I can find, for supposing it, the opinion must have been taken up, on a supposition that there was no opening between the mouths of the Kistnah and Mahanuddy (or Cattack river), of magnitude sufficient for such a river as the Gonga. It could not be for the want of space sufficient for the Cattack river to accumulate in, independent of the Gonga; for the distance is as great from the mouth of the Cattack river to the Berar mountains, as from the mouth of the Godavery to the Baglana mountains. The truth is, that no just account of these rivers, any more than of the Burrampooter, had then reached any European geographer. Succeeding inquiries and discoveries have made it certain, that the Godavery is the river that runs under Rajamundry, and falls into the sea between Coringa and Narsapour; and that the Cattack river, rises in the Ruttunpour country. But the recent discovery (to Europeans) of the Bain Gonga, whose course is directly acroſs the supposed course of the Gonga (the name given to this compound river, whose head was the Godavery, and tail the Mahanuddy), clears up at once the ambiguity; if any there could be supposed to remain, after the discuſsion of the subject in the memoir of the map of 1782. The Godavery has its source about 70 miles to the N E of Bombay; and in the upper part of its course, at least, is esteemed a sacred river by the Hindoos: that is, ablutions performed in its stream, have a religious efficacy superior to those performed in ordinary streams. The Beemah, according to Mr. Orme, is supposed to have similar virtues: no rare sacred rivers

by any means uncommon in other parts of India.* The Godavery, after traversing the Dowlatabad soubah, and the country of Tellingana, from west to east, turns to the south-east; and receiving the Bain Gonga, about 90 miles above the sea, besides many smaller rivers, separates into two principal channels at Rajamundry; and these subdividing again, form all together several tide harbours, for vefsels of moderate burden. Ingeram, Coringa, Yanam, Bandarmalanka, and Narsapour, are among the places situated at the mouth of this river; which appears to be the most considerable one, between the Ganges and Cape Comorin. Extensive forests of teek trees border on its banks, within the mountains, and supply ship timber for the use of the ports abovementioned: and the manner of launching the ships in those ports, being very singular, I have subjoined an account of it in a note.† The Godavery was traced about 70 miles above its mouth; the rest of its course is described only from report: save only at the conflux of the Bain river, and in places where different roads crofs it; until we arrive at the part where M. Bufsy's marches have described it generally, in common with other particulars.

* There are seven rivers particularly celebrated and respected by the Hindoos; and which are collectively distinguished by the name of *Sutnud*, or the Seven Rivers; namely, the Ganges, Jumnah, Godavery, Sersooty, Nerbuddah, Sind, and Cauvery. (Kirkpatrick's MSS.)

† The ship or vefsel is built with her keel parallel to the shore; and, as it may happen, from 200 to 300 feet from low water mark. When completed, she is placed on two strong pieces of timber, called *dogs* (in the nature of a sledge of enormous dimensions); and on these, a sort of moveable cradle is constructed, to keep the vefsel upright. Two long Palmyra trees, as levers of the second kind, are then applied to the ends of the *dogs*, and by means of these powers, they, together with the vefsel that rests on them, are gradually pushed forwards over a platform of logs, until they arrive at the lowest pitch of low water; or as far beyond it, as the levers can be used. Tackles are applied to the ends of the levers, to increase the power: the fulcrums, are wreaths of rope, fastened to the logs on which the vessel slides: and are removed forwards as she advances. Two cables from the land side, are fastened to the vefsel, to prevent her from sliding too rapidly, and these are gradually let out, as she advances.

It is commonly the work of two days to transport the vefsel to the margin of low water. If the tide does not rise high enough to float her from thence (which it seldom does if the vessel be of any considerable burden), part of the cradle is taken away, and the ship left chiefly to the support of the cables till high water, when they are suddenly let go, and the vefsel falls on her side; and with the fall, disengages herself from the remains of the cradle, and at the same time plunges into deeper water. A ship of 500 tons has been launched in this manner.

The course of the Bain Gonga (or Bain river), as I have just observed, is quite a new acquisition to geography; and we are indebted to the late Col. Camac for it. This river, which has a course of near 400 miles, was not known to us, even by report, till very lately. It rises near the southern bank of the Nerbuddah, and runs southward through the heart of Berar; and afterwards mixes with the Godavery, within the hills that bound our northern circars. This circumstance confutes at once the idea of the Godavery being a continuation of the Cattack river. I cannot find how far up the Bain Gonga is navigable; but it is mentioned as a *very large* river, in the early part of its course; and is probably equal in bulk to the Godavery, when it joins it.

There yet remains in the map, between the known parts of Berar, Golconda, Orifsa, and the circars, a void space of near 300 miles in length, and 250 in breadth; nor is it likely ever to be filled up, unlefs a very great change takes place in the state of European politics in India: for we appear not to have penetrated beyond the firſt ridge of mountains, till very lately; when the discovery of the black pepper plant was made, in the districts of Rampa.

Beyond the *great* ridge of mountains (which may be 60 or 70 miles inland) and towards Berar, is a very extensive tract of woody and mountainous country, with which the adjacent countries appear to have but little, if any, communication. We may fairly suppose that to be a country void of the goods in general esteem among mankind, that does not tempt either their avarice, or ambition. Although surrounded by people who are in a high degree of civilization, and who abound in useful manufactures, we are told that the few specimens of these miserable people, who have appeared in the circurs, use no covering but a wisp of straw. We know not, with any degree of certainty, how far this wild country extends within the great ridge of mountains, between the parallels of 17° and 20°: but the first civilized people that we hear of beyond them,

are the Berar Mahrattas. I think it probable that it may extend 150 miles, or more. However, a party of Berar Mahrattas found their way through this country, and the Bobilee hills, in 1754 (Orme, Vol. I. page 373), at an opening called Salloregaut) in the Cicacole circar. Our ignorance respecting this tract may well be accounted for, by its lying out of the line of communication between our settlements; and by its never having been the seat of any war, in which the Europeans have taken part. I suspect, however, that the tract in question, is either too desert, or too savage, to be easily or usefully explored.

Between the Godavery and Kistnah rivers, and on the north-east of Hydrabad, was the ancient country of Tellingana (or Tilling), of which Warangole (the Arinkill, of Ferishta) was the capital. The site of this capital is still evident, by means of the old rampart; which is amazingly extensive. A modern fortrefs is constructed within it; and is in the poſsefsion of the Nizam. Col. Peach marched by way of Ellore and Combamet, to this place, during the war of 1767; and the road was surveyed by Lieutenant, now Major Gardner. His horizontal distance from Ellore to Warangole was 134 G. miles: and the bearing W 38 N*. A note accompanying Major Stevens's copy of this route, says, that the latitude of Warangole is 17° 57′: and this bearing and distance accords with it. I am ignorant of the exact relative positions of Warangole and Hydrabad: Montresor's map makes the distance between them 45 G. miles. My construction makes it 47, and the bearing of Warangole from Hydrabad N E by N. Montresor's bearing of Warangole from Ellore, is very faulty; and it is remarkable, that though there are several plans of this road, most of them differ widely, both in bearing and distance. Major Gardner's, I apprehend, may be depended on.

The places round Warangole, are taken from a MS. map of Mr.

* His bearing is corrected by the compaſs of Col. Pearse's map, from which it differed 2° 55′.

Dalrymple's. Byarem, Culloor, Damapetta, &c. are all from MSS. belonging to the same gentleman.

The road from Hydrabad to Nagpour, was communicated by Mr. John Holland. The distance is stated at 169 coſses; which agrees remarkably well with the interval on the map: and, as Nagpour is a fixed position, we may infer, that Hydrabad ought to be rather in 17° 12′ than 17° 24′ (see page 214). The two places bear nearly N and S from each other; and the whole distance, of course, is difference of latitude. A place named Indelavoy, or Endelavoy (Indelvai, in Tavernier, and Thevenot), appears in this route, between the Godavery and Hydrabad: and Thevenot's route from Aurungabad to Hydrabad, falling in there, determines the direction of both roads; and also the positions of Indour, and Sitanagur: the latter being a famous pagoda in that part. Neermull, a city of note, belonging to the Nizam, also rises in this route; and is about 10 G. miles from the north side of the Godavery, and about 132 from Nagpour. Mr. Ewart also collected some routes from Nagpour, Neermull, and Hydrabad; and a route by way of Chanda, appears in Mr. Orme's Historical Fragments of the Mogul Empire. As one of Mr. Ewart's routes gives the position of this Chanda (a considerable city belonging to Nagpour, and about 70 G. miles to the south of it), we are enabled to lay down this road; which was marched over, by M. Buſsy.

Another principal branch of the Godavery, is the Manzorah; a considerable river which rises in the country of Amednagur, and after a circuitous course by Beder, joins the main river below Nander.

Many interesting positions arise in the marches of M. Buſsy, between Hydrabad and Aurungabad, by the two roads of Beder, and Nander; and no leſs in the march from Aurungabad to Sanore. Beder is a fortified city, about 80 road miles to the N W of Hydrabad; and was in former times the capital of a considerable kingdom.

The road from Beder to Burhanpour, through Patris and Jaffierabad, is from M. Thevenot. It aſsists in determining the position of Jaffierabād, a principal town on the N E of Aurungabad. The road from Nander to Nagpour, through Mahur, is partly from M. Buſsy, and partly from Mr. Ewart; by whose account Mahur is 78 coſses, but by construction about 87, S W from Nagpour.

The road from Poonah to Beder, is taken from the journal of the late Col. Upton: who returned from his embaſsy, by the route of Hydrabad, and the circars, to Bengal. His journal has much merit, as being full and descriptive of the countries he paſsed through; as well as of their respective boundaries: but he was unlucky in estimating his course; and it happens that we have no croſs line to correct it.

The road from Aurungabad to Sanore-Bancapour, is taken from the map of M. Buſsy's marches: and Sanore was the extreme point of his campaigns, that way. See Orme, Vol. I. p. 425. I could only take the bearing and distance, as I found them in the map: and it is a great defect, that in so considerable an extent, there should be no observation of latitude; that we know of. By the *data*, Sanore is placed in lat. 15° 39′; lon. 75° 44′; or about 117 G. miles E by N from Goa. There is nothing to check this position, from the Malabar side: not even the number of computed coſses from Goa. However, let the matter stand as it may, with respect to the mathematical exactneſs of the question; had it not been for these marches of M. Buſsy (the only remaining monument to the French nation, of their former short-lived influence and power in the Deccan), the geography of these parts, would have been extremely imperfect: but as they extend through more than four degrees of latitude, and more than five of longitude; they occupy not only the principal part of the Deccan, but by fixing the positions of so many capital places, and intersecting the courses of so many rivers, tend to clear up many other positions.

Visiapour (or more properly Bejapour) is not so well ascertained, as might be wished; although much improved in its position, by means of Capt. Reynolds's survey, from Poonah to Baddammy, on the south of the Kistnah river; taken a very few years ago.

The nearest point to Bejapour, that can be regarded as fixed, is Arruck, Areek, or Areg, as it is differently written by Capt. Reynolds, by Mandesloe, and by Anquetil du Perron. It lies a few miles from the north bank of the Kistnah river; and is supposed to be about 45 G. miles S W, or S W by W from Bejapour: this idea being collected from Mandesloe's route. On the first construction of the map, I had placed Arruck, partly on the authority of Anquetil du Perron, whose route from Goa to Poonah, is very vaguely described* in the first volume of his *Zendavista*; and partly on that of Mandesloe; these two routes, falling into each other at Arruck and Jnapour: and on this foundation, together with the reports of the distance from Goa, Carwar, and Dabul; and the latitude (as given in the *Lettres Edif.* Vol. XV.); I had placed Bejapour. The particulars of the distance, &c. are as follow:

Mandesloe, who travelled the roads himself, says, that it is 80 leagues (French, I apprehend) from Dabul, on the coast of Malabar; and 84 from Goa; which may give 142 G. miles from Dabul, and 149 from Goa: making Bejapour in lat. 17° 26′ 30″, lon. 75° 19′. P. Du Val, who formed a map of Mandesloe's routes (a copy of which is in the British Museum), and probably had lights, besides what are furnished by the travels, to guide him; makes the distance between Dabul and Bejapour, greater than between Bejapour and Goa: which might possibly be the case, though contrary to what is said in the travels.

Tavernier reckons 85 cosses from Goa to Bejapour (or rather,

* Speaking as a geographer.

perhaps, from Bicholim, the landing place on the continent), or eight days journey; which eight days may give 140 G. miles on a straight line; and agrees with what is said above. Fryer reckons Bejapour ten days journey from Carwar, or about 180 G. miles. Cæsar Frederick agrees with Tavernier, in making it eight days journey from Goa.

The *Lettres Edifiantes* make the latitude of Bejapour 17° 30′. I placed it in lat. 17° 26′ 30″, lon. 75° 19′; that is, 149 G. miles from Goa; 142 from Dabul; 171 from Carwar; and 203 from Golconda. At the same time, I thought it probable, that it might not be within 20 miles of its true position.

Capt. Reynolds's route paſsed through Arruck; which he reckoned 110½ G. miles from Poonah, whilst my position gave only 101. He also made it 56½ east of Poonah; my position 48 only. His latitude 16° 56′ 30″; mine 17°. Now, as Bejapour is to be placed in reference to Arruck, it is plain that it ought to take a more easterly position than I had given it: and it is now placed accordingly in latitude 17° 28′; longitude 75° 27′: and somewhat more northwardly in respect of Arruck, than it was before.

Bejapour is a considerable city, and was once the capital of a large kingdom of the same name. It is now in the hands of the Poonah Mahrattas.

Whether it be regarded on the score of novelty, or of actual use, as giving us correct ideas of so many interesting positions, between Poonah and the northern frontier of Tippoo's country; Capt. Reynolds's route is certainly one of the most productive in geographical materials, that we have lately seen: and that, not only in the actual line of his progreſs, but on either side of it: and this is the true spirit of the science, which contemplates not only the objects that are immediately in view, but directs its inquiries to all around the neighbourhood. General geography will flourish only in the hands of such profeſsors.

Amongst other positions, the following are ascertained by Capt. Reynolds's route:

Sattarah, the capital of the Mahratta state, during the time of the rajahs of Sevajee's line. It lies near the eastern foot of the Gauts, and near the most distant source of the river Kistnah.

Merritch (or Merridge), mentioned in page cxxv of the Introduction, as the capital of Purseram Bow, a Mahratta chief. This is situated near the north bank of the Kistnah; eight or nine G. miles to the W N W of Arruck.

Pannella, so much celebrated in the history of Sevajee (See Orme's Historical Fragments of the Mogul Empire): as also Darwar, sometimes written Danwar; which place has been also the subject of history, in our own times; in particular for the siege which it lately sustained against the Mahrattas. It is one of Tippoo's frontier towns, towards the dominions of the Paishwah.

A general idea of the upper part of the course of the Kistnah river is also conveyed by this survey: and Moodul, or Muddul, near it, points out the direction of the route from Goa to *Galgala* on the Kistnah, travelled by a Portuguese gentleman, who visited Aurungzebe's camp at Galgala, during his campaigns in the Deccan, at the latter end of the last century. The MS. account of this route, was amongst the great variety of communications made by my friend Mr. Dalrymple.

Whether the Baddammy of Capt. Reynolds, be the Bandemgur of M. Bufy's route, I know not. The marches of the British detachment, that accompanied the Mahratta army to Darwar, during the last campaign, will probably settle this point, in common with a great many others.

The travels of M. Anquetil du Perron from Goa to Poonah, furnished some useful matter towards filling up a part, that has long remained almost a perfect void, in the maps of India; but a great part of it is now superseded by the survey of Capt. Reynolds. M. Anquetil speaks of cofses and leagues as synonymous

terms; and reckons 40½ of these from Vaddal, at the western foot of the Gauts, and about 12 cofses (or leagues) S E or E S E from Goa, to Areg: and 51½ more from Areg to Poonah. One can hardly tell how to denominate his itinerary measure; which is about two G. miles and a sixth in horizontal measure. On the road from Poonah to Nimderra (in page 212), we have observed the same deviation from the standard of the itinerary measures of the country; for, on that road, his cofses turn out exactly two G. miles each, on a straight line. It should be a rule for every traveller to use, not only the measures, but the denomination of the country he paſses through; for then we are likely to poſsefs a better scale, than his judgment can furnish us with. This will be understood to apply to computed distances only. I lament exceedingly that M. Anquetil had not a compaſs with him, with which he might have taken the bearing of the road between Poonah and Aurungabad; and between Goa and Arruck; for in a quarter where geography is so bare of materials, that every notice of the kind is received with avidity, that gentleman had a fair opportunity of distinguishing himself in this way; as he may be said, in some parts of his route, to have trod a new path.

Naldorouk, Malkar, Sakkar, Kandjoly, and other places in the Deccan, are from Mr. Orme's Historical Fragments; to which publication I owe many obligations, as well on the score of rational amusement, as of genuine information.

Raolconda, a famous diamond mine, is placed in Mr. Montresor's map, about 15 G. miles to the west of Ralicotte, and 12 from the north bank of the Kistnah; but I know not on what authority. Tavernier, who visited Raolconda, gives its distance from Golconda at 17 gos, of four French leagues each. He croſsed a river, that formed the common boundary of Golconda and Visiapour, about four gos, or more, before he came to Raolconda: and this river can be no other than the Beemah; which, to this day, forms the eastern boundary of Visiapour; and paſses about 80

or 82 G. miles to the west of Golconda, croſsing the road from it to Ralicotte. If we reckon the 82 miles, 13 gos: that is, forming a scale from the distance between Golconda and the river Beemah, each gos will be 6,3 G. miles in horizontal distance (or nearer three than four French leagues); and Raolconda will be placed about 25 G. miles on the west of the Beemah; or 11, east of Ralicotte.

If we take the *gos* at four French leagues, without regarding the proportion arising from the above calculation, it will bring Raolconda very near the situation aſsigned it by Montresor. But I have nevertheleſs adopted the former, thinking it, on the whole, the most consistent.

Cæsar Frederick says, that the mines (Raolconda) are six days journey from Bisnagur: but this will apply equally to either of the above positions.

The general course of the Kistnah river, from the sea to Bezoara, is chiefly taken from Major Stevens's maps, communicated by Mr. Dalrymple. From thence, to Timerycotta is from Montresor, collated with Capt. Davis's sketch of Guntoor, &c. and a French MS. map. From that place, to the conflux of the Tungebadra, it is drawn only from report, and in the form it is usually done, in the maps that include its course. From the mouth of the Tungebadra to Gutigui, or Catigui, its course is drawn in a French copy of M. Buſsy's marches; and I have corrected it in two places by a journal, kept by the late General Joseph Smith. Above Gutigui, its course is marked in certain places, by the roads that croſs it; particularly those travelled by Reynolds and Mandesloe: but, upon the whole, nothing more than its mere general course is known, except within 70 miles of the sea. General Smith remarks, that the Kistnah was fordable both above and below the conflux of the Beemah river, in the month of March: and that a few miles below the mouth of the Beemah, its bed was 600 yards wide, and exhibited an uncommon appearance, from the number and diversity of the rocks in it.

The Kistnah and Godavery rivers, however remote at their fountains, approach within 80 miles of each other, in the lower parts of their course; and form an extensive tract of country, composed of rich vegetable mould, such as is usually found at the mouths of large rivers. Here we behold, on a smaller scale, the same economy that is observable in the agency of the Nile and Ganges, in forming the DELTAS of Egypt and Bengal; by means of the finer particles of earth, that are swept down by those vast rivers, and their branches, in a course of more than 2000 miles. Those who have been on the spot, and reason from analogy, in this case, will readily suppose that the whole, or the greatest part of the tract, included between Samulcotta and Pettapolly (about 150 miles in length along the sea shore, and from 40 to 50 wide), is in reality a gift of the two rivers, Godavery and Kistnah. The same appearances, indeed, may be observed at the mouths of the Cattack and Tanjore rivers; but the two rivers in question, by draining a much greater extent of country (that is, from the 15th to the 21st degree of latitude), have collected materials for a greater quantity of new land. Within this new formed land, and about midway between the Godavery and Kistnah, the soil forms a hollow space; which in its lowest part is a lake at *all seasons*; and in all the other parts, an extensive inundation, during the season of the periodical rains; being then a lake of 40 or 50 miles in extent. This is called the Colair lake; and its origin may be referred to the same cause, as that which produces the lakes and morafses of the Egyptian and Bengal deltas: which is, that the deposition of mud by the two rivers (or the two branches of one river), at the time when they overflow, is greatest near the banks: for the farther the inundation flows from the *margin* of the river, the more of its earthy particles will be deposited in its way; and the lefs will remain for the distant parts; which therefore cannot be filled up to the level of the ground, nearest the bank of the river: and thus the ground will acquire the form of an inclined plane, from each

river bank towards the interior part of the country; where a hollow space will be left: but it may be expected, that when the rivers have raised their banks, and the adjacent country, to the greatest poſsible height, which is that of the periodical flood (and the ground can be raised no higher); the subsequent inundations will find their way into the hollow space, from the lower part of the river; and will gradually fill up with mud, the part of the lake that lies towards the source of it: and as the new land continues to encroach upon the sea, the lake will travel downwards in the same proportion. For the natural course of things is, that when the new lands that are the furthest removed from the sea, are raised as high as the agency of the waters will admit; that portion of the mud, which cannot be deposited above, is carried lower down to raise other lands; or to lay the foundation of new land, further out: and thus the regular declivity of the channel is preserved. All lands subject to inundations, *must* continue to rise; because the water of the inundation deposits, at least, *some portion*, of the earthy particles suspended in it: but there must be a certain point of elevation, beyond which no delta or river bank *can* rise; for each succeſsive point in the course of a river, must be lower than the preceding one. As to the Nile, its banks will admit of being raised, throughout the whole Said, as well as lower Egypt; the cataracts being so much elevated above the lower part of the river: and Egypt also differs in another particular, from India, in that no rain falls there, to wash away the light parts of the soil into the river, before the inundation: whereas, the heavy rains of Bengal, previous to the inundation, must reduce the level of the elevated grounds, and contribute partly towards filling up the hollows: and no small proportion of what is deposited in one season, will be carried lower down, or into the sea, in the next. So that the progreſs of raising the lands, must have been more rapid in Egypt, than in any of the moister regions.

It appears to me, that the gentlemen who have lately reasoned so

ingeniously on the increase of the delta of the Nile, have omitted a circumstance of considerable moment, as it respects the length of the periods, required to form given quantities of new land in; or to elevate the old to a certain degree. We never fail to remark, on a survey of the naked summits of mountains, that the rain has, in a course of ages, washed away the earth that covered them; or, in other words, that there is a progreſsive motion of the finer particles of earth, from the mountains, towards the vallies. Admitting this to be true, and also that a proportion of it is swept away by the torrents: the longer the rivers continue to run, the leſs quantity of earth they must carry away with them: and therefore, the increase of the deltas, and other alluvions of capital rivers, must have been more rapid in earlier periods of the world's age, than now.

After this long digreſsion, it would be unpardonable in me to omit an account of a plan proposed by my ingenious friend, Mr. John Sulivan: which was, to open a communication at all seasons, between the Colair lake and its parent rivers, with a view to the improvement of the adjacent lands, (which form a part of the circars), and of the inland navigation. It appears that an imperfect channel already exists, between the lake and the Godavery river; as well as the traces of an unfinished one, towards the Kistnah; and which this gentleman, with great appearance of probability, imputes to a like design having been formed by the natives, in early times. This scheme, which appears to be practicable on easy terms, has never been adopted: the proposal was made in 1779: and, for the particulars, I shall refer to the tract itself, which also contains much information on other subjects.

To return to the subject of the Memoir. The Beemah river is known to be a principal branch of the Kistnah, coming from the N W, and joining it near Edghir. It rises in the mountains, on the north of Poonah, probably not far from the sources of the Godavery: and paſses within 30 miles of the east side of Poonah,

where it is named *Bewrah*, as well as Beemah. General Joseph Smith croſsed this river, when accompanying the Nizam from Hydrabad towards Mysore, in 1766; about ten miles above its junction with the Kistnah, where it was fordable.

The Visiapour river is a branch of the Beemah, and is named Mandouah, by Mandesloe.

The mountains named the GAUTS, Gattes, or INDIAN APENNINE, which extend from Cape Comorin to the Tapty, or Surat river; occupy, of course, a part of the tract, whose construction is discuſsed in this Section: but I shall reserve a general account of the Gauts, for the next Section; which treats of the peninsula in general, and of the Gauts, as included in it. This celebrated ridge does not terminate in a point or promontory, when it approaches the Tapty; but departing from its meridional course, bends eastward, in a wavy line, parallel to the river; and is afterwards lost among the hills, in the neighbourhood of Burhanpour. In its course along the Tapty, it forms several paſses, or descents (that is, *Gauts*, according to the original import of the word, which means a landing place), towards that river: whence the country into which the paſses descend, was originally named Candeish, or the low country. It would appear, that the ridge abates of its great height, after paſsing the parallel of Baſseen, northward; for Mr. Farmer, in his way from Poonah towards Naderbar, observed that the paſses had all a descent northward; forming, as it were, a series of steps, until he landed in Candeish. He was then a hostage with Madajee Sindia; who at that time led the grand Mahratta army into Guzerat, against General Goddard.

The country included generally within this bend of the Gauts, is named Baglana (or Buglaneh). It is exceedingly mountainous, but contains many fertile and pleasant tracts. Few countries have greater advantages, in point of natural strength: and this is increased by no leſs than nine strong fortreſses, situated on the summits of rocks: of which Salheir and Mulheir (the *Saler-Mouler* of

the map) are accounted impregnable, to mere force. According to the arrangement of its boundaries, Rairee and Jeneahgur, the strong-holds of Sevajee, were not included in Baglana: for the latter, which answers to the Juneer of Capt. Reynolds, is to the south of Naſsuck Trimbuck; which is itself beyond the southern limits of Baglana. For, according to Abdul Humeed, it extended from the sea coast near Surat, which was its western boundary, to the borders of Dowlatabad (or Aurungabad) eastward; in length 100 common coſses; and in breadth, from Naderbar and Sultanpour, on the north, to Naſsuck Trimbuck, on the south, 70 coſses. Shahnawaz, although he agrees with Abdul Humeed, in the length, allows only 80 for the breadth. It certainly is not 70 coſses, and yet much more than 80, in distance between the aſsigned limits on the north and south: so that there appears an error in both their numbers.

Being encompaſsed (says Capt. Kirkpatrick) by Guzerat, Dowlatabad, and Candeish, it owed its independence, not to its natural strength, but to the addreſs of its rajahs; who courted the princes of those kingdoms, but without ever waiting personally on any of them. Whenever the conquest of it was attempted by any one of these princes, the other two armed in its defence. This curious fact, which (says he) I take from the Emperor Jehanguire, shews that the balance of power was carefully attended to, by these sovereigns; and also denotes the important advantage that either would have gained over the other, by the poſseſsion of Baglana. When the surrounding kingdoms succeſsively fell to the Mogul power, the rajah, for the first time, acknowledged a superior, and visited the court of Acbar. But even then, the Moguls contented themselves with a *tribute* only; until the rapid progreſs of Aurungzebe's conquests and power in the Deccan. Its revenue, previous to the Mogul conquest, was about 80,000 l.

Shahnawaz confirms the report of Jehanguire, concerning the political conduct of the rajahs of Baglana, towards their powerful

neighbours. The person here quoted, is the Shahnawaz Khan, who makes so conspicuous a figure, as the minister of Salabid Jung, in Mr. Orme's history. I apprehend that it is also the same person, whom Capt. Kirkpatrick quotes on the subject of the boundaries of Cashgar, in page 195.

Some general information respecting the situation of the teek forests, and of the extent of the British conquests in 1780 and 1781, along the western foot of the Gauts, between Baſseen and Surat, was obligingly communicated by Mr. Hunter, of the East-India direction, and by Mr. Holmes. The teek forests, from whence the marine yard at Bombay is furnished with that excellent species of ship-timber, lie along the western side of the Gaut mountains, and other contiguous ridges of hills, on the north and north-east of Baſseen: the numerous rivulets that descend from them affording water-carriage for the timber. I cannot close this subject, without remarking the unpardonable negligence we are guilty of, in delaying to build teek ships of war, for the service of the Indian seas. They might be freighted home, without the ceremony of regular equipment, as to masts, sails, and furniture; which might be calculated just to answer the purpose of the home paſsage, at the best season: and crews could be provided in India. The letter subjoined in a note, and which was written with the best intentions, will explain the circumstances of the case.* Teek ships of 40 years old and upwards, are no uncommon objects in

* "Frequent have been the opportunities I have had, of observing how very rapid the decay of ships built of European timber is, in the East Indies; and, on the contrary, how durable the ships are that are built of the wood of that country, namely, the TEEK; which may not improperly be styled INDIAN OAK. The number of ships of war that were ruined in those seas, during the late war (1757 to 1762), may be admitted as a proof of the former remark; and the great age of the ships built in India, may serve to prove the latter. What I mean to infer from this, for your lordships' use is, that ships of war, under third rates, may be constructed in India; and, with moderate repairs, last for ages: whereas a ship of European construction can remain there but a very few years: to which disadvantage may be added, that of losing, in the mean time, the services of the ships that are sent to relieve the worn-out ones.

"Bengal produces iron and hemp; and the neighbouring forests, pine masts: nothing is wanted to bring all these into use, but a fit opportunity, and proper encouragement.

"August 20, 1778."

the Indian seas: while an European built ship is ruined there, in five years. The ships built at Bombay are the best, both in point of workmanship and materials, of any that are constructed in India: and although fourth rates only, are mentioned in the letter, there is no doubt but that third rates may be constructed; as there is a choice of timber. The Spaniards build capital ships in their foreign settlements. The East-India Company have a teek ship on her fourth voyage at present;* which ship has repeatedly wintered in England: therefore any objection founded on the effects of frost on the teek timber, is done away.

* That is, in 1788. She is now, 1791, on her sixth voyage.

SECTION V.

The Countries contained in that Part of the PENINSULA, *lying on the South of the* KISTNAH *River.*

THIS tract, which in extent is not a fifth part larger than the Bengal provinces; yet, by its political divisions, by the talents and ambition of its princes, and moreover, by their being stimulated by the different European powers, whose mercantile views led them thither; it has furnished, of late years, more matter for speculation and history, than, perhaps, all the rest of the Mogul empire put together.* But although it has been the theatre of repeated wars between the Europeans and the natives, as well as between the Europeans themselves; yet so ample a supply of geographical matter has not been supplied, as by the wars and negociations in the north. The geography of some of the western parts of the peninsula, is as little known to us, as that of the central parts of Hindoostan.

* It is lamentable to a feeling mind, to reflect how large a portion of their miseries the unhappy natives of the Carnatic owe to the English: I mean from the insufficient protection afforded them, at the commencement of the war of 1780. The saying of the old woman to Philip, "BE NO LONGER KING," might well have been applied to the executive government in the Carnatic. Much eloquence has been employed in describing the wretched state of the inhabitants of Bengal; when, in reality, *they* are to be clafsed among the happiest nations throughout Asia. Poets deal in fiction: but a plain tale of woe will best describe the sufferings of the helplefs inhabitants of the Carnatic, during Hyder's invasion. And here I cannot refuse a tribute of applause to the character and abilities of the nobleman, who assumed the government of Madras, at a period when the British interests could hardly be said to have an existence in the Carnatic; Hyder having nearly the entire pofsefsion of the whole country. I cannot expreſs my opinion of this nobleman's character, in a more forcible manner, than by regretting that such shining talents, controlled by a disinterested mind, should not be employed for the benefit of the public.

The figure of this tract is a triangle, of which the course of the Kistnah river forms the base, and the coasts of Coromandel and Malabar, the sides. Its extent from the Kistnah to Cape Comorin, which forms the apex of the triangle, is about 600 British miles; and its breadth, in the widest part, is about 550.

The construction of the sea coasts, has been already described in the first Section; and that of the course of the Kistnah river, in the latter part of the fourth.

Madras, or Fort St. George, as has been observed (in page 13), lies in lat. 13° 5′, lon. 80° 25′; and close on the margin of the sea. It is the principal settlement of the British East-India Company, on the east side of the peninsula; and is a fortrefs of very great strength, including within it a regular, well-built city. But as it was impofsible to fortify and garrison, in an effectual manner, a city of such extent as the political and commercial consequence of Madras, must give birth to; there is a second city, separated from Madras, by the breadth of a proper esplanade only; and although near four miles in circuit, is fortified in such a manner, as to prevent a surprise from the enemy's horse; an evil to which every open town in the Carnatic is subject, from the drynefs and evennefs of the country. Madras was settled by the English about the year 1640; and was hardly defensible, until the destruction of Fort St. David, in 1758, pointed out the neceſsity of it. It is now, perhaps, one of the best fortrefses in the pofsefsion of the British nation: and although not of so regular a design as Fort William, yet from the greater facility of relieving it by sea, and the natural advantages of ground, which leaves the enemy lefs choice in the manner of conducting his attacks; it may on the whole, be deemed at least equal to it.

Madras, in common with all the other European settlements on this coast, has no port for shipping; the coast forming nearly a straight line: and it is also incommoded with a high and dangerous

*surf** or wave, that breaks upon it; and induces the neceſsity of using the boats of the country, to land in. These are of a singular construction; being formed without ribs, or keel; with flat bottoms, and having their planks sewed together: iron being totally excluded throughout the whole fabric. By this construction, they are rendered flexible enough to elude the effects of the violent shocks which they receive, by the dashing of the waves, or surf, on the beach: and which either oversets, or breaks to pieces, a boat of European construction. No port for large veſsels occurs between Trinkamaly and the Ganges: that is, in an extent of 15 degrees: so that the comparative proximity of the former, to Madras and Pondicherry, renders it a capital object, both to the English and French.

The Company's lands (or Jaghire†) extend from Madras to the Pullicate lake, northward; and to Alemparvé, southwards: and westward, beyond Conjeveram: that is, about 108 B. miles along shore, and 47 inland; in the widest part. This whole tract hath had a regular survey: and Mr. Pringle, who surveyed the marches of the army under Sir Eyre Coote, during the late war, has ascertained some interesting geographical positions, beyond it; and by this means extended very considerably, the dimensions of what may be called the *surveyed tract:* so that we are enabled, with a little adventitious help, to fill up, with tolerable accuracy, all the country between the parallel of Pullicate, northward, and Cuddalore, southward; bounded on the west, or inland side, by a line drawn from Cuddalore through Arnee, Velore, and Chittoor; and eastward by the sea. The whole of this tract is a triangular space of

* The reader will find in my friend Mr. Marsden's very excellent history of Sumatra, an account of the SURF: a phenomenon which I do not recollect ever to have seen discuſsed in a philosophical manner, in any former treatise. The account will be found in p. 28, to 33.

† The term Jaghire means generally, a grant of land from a sovereign to a subject, revocable at pleasure; but generally for a life rent. The Jaghire in question, is, I believe, understood to be held in perpetuity. It contains about 2440 square miles; and its revenue is reckoned at about 150,000l. per annum.

106 G. miles in length, by 70 wide. By means also of Mr. Pringle's bearings and measured routes, the positions of Portonovo, Sautgud, and Amboor, are obtained; which last may be considered as the most western point determined with accuracy, any where to the north of Tritchinopoly: and Amboor is only one-fourth of the whole distance acrofs the peninsula. I cannot find that the road to Colar was measured, during the campaign of 1767.

Arcot is found to be nearer to Madras than was before supposed. I have fixed it by a series of triangles, by means of Wandiwash, Narnaveram, and Sholingur hills; and a base, furnished by the Jaghire map; at 56,6 G. miles, in horizontal distance, from Madras; and about 13′ 30″ south of its parallel; whence, its latitude will be 12° 51′ 30″, lon. 79° 28′ 15″. I do not know that its observed latitude is recorded any where. Mr. Pringle's map makes its distance from Madras 57,9; and M. D'Anville 58,2 in his MS. of positions: and another French MS. map, 59,1.

Arcot is reckoned the capital of the Carnatic; and must be a place of great antiquity, by its being taken notice of by Ptolemy, as the capital of the *Soræ*; or *Sora-mandalum:* from whence corruptly Choro-mandel. It is a pretty large city, and its citadel is esteemed a place of some strength, for an Indian fortrefs. The defence which it made under Clive, in 1751, established the military fame of that illustrious nobleman; whose foibles exposed him to the attacks of enemies, who were better qualified to observe his defects, than to imitate him in the higher parts of his character: to which posterity will do ample justice, when it is placed beyond the reach of the envy of cotemporaries: and when his foibles will be as little remembered, as the malice of his enemies.

The position of Velore, is from Mr. Pringle's distance, corrected by the bearing of Sholingur hill. In his map of Coote's campaigns, he has given too much distance between Arcot and Velore; for it is 17 B. miles in the map, and only 15 by the road, in the tables. Also, between Conjeveram and Arcot, the road distance exceeds the

horizontal distance, by three-fourths of a mile only, in $26\frac{1}{2}$ miles. These, I apprehend, are mistakes, occasioned by haste.

Velore is a post of great importance, commanding the great road leading into the Carnatic, from the valley of Vaniambaddy; and the directest route from the Mysore country. It consists of three strong forts, on as many hills; and is justly deemed impregnable to an Indian army. It is said to have been originally fortified by the Mahrattas, more than 200 years ago. Among other acts of generalship exhibited by Sir Eyre Coote, during the late war, the relief of this place, in the face of Hyder's whole army, may be reckoned a capital one. It is about 90 miles to the westward of Madras.

Paliconda, had its bearing taken from Velore, and the distance between them, was measured. Amboor is determined by the distance from Paliconda, and the bearing of Coulasgur; which latter is determined by bearings from Velore and Arcot. The distances are obtained by means of Mr. Pringle's table of roads, with allowance for winding. Lastly, Sautgud is placed by angles taken at Amboor and Velore.

These, together with Col. Pearse's line, along the eastern coast of the peninsula, and those before taken notice of in the southern provinces (in Section I.) are all the measured lines that occur in these parts: together with one, and only one, observation of latitude; that is, at Chinna-Balabaram, about the middle between the two seas. This being the case, it will follow, that the various materials of which the geography of the tract in question is composed, can be no otherwise arranged, than by establishing as *primary stations*, such places as we have the best *data* for; and which have the greatest number of positions dependent on them: and this being done, to adapt the matter to the respective intervals, between these primary stations; which intervals must of course determine the scales and bearing lines of the several MS. maps, of which the materials are composed.

I shall attempt only to give an account of the manner of determining the principal of these stations, or points of connection; and that for the use of future geographers: to describe the whole, would lead me into unneceſsary prolixity. The primary points which it became neceſsary to describe, in the account of the sea coast, were chiefly from actual measurement; as Tritchinopoly, Tanjore, Madura, Palicaudcherry: and I may now add, Coimbettore and Carroor: which are placed by measurement also. Arcot and Amboor, I have just mentioned; and Poliput and Chittoor, are the only remaining ones, that are established by survey.

Of those that remain to be determined, by tiresome discuſsion, and comparison; and in some cases by mere judgment, founded perhaps, on doubtful testimony; are Bangalore, Trinomalee, Darampoury, Dalmacherry, Gooty, Calastri, Sami-Iſsuram, Innaconda, Combam, Adoni, and Timerycotta. And of those furnished by Col. Pearse's march, are Nellore, Ongole, and Siccacollum.

Bangalore, as the first mentioned, is also the most important; as being in the centre of the peninsula, and having routes paſsing through it, in every direction. It is in itself, a place of great political importance, being a fortreſs of strength; and from situation, the bulwark of the Mysore country, towards Arcot. A variety of MS. maps of the country lying on the west of the Carnatic, and between it, and Seringapatam, have appeared: most of them, I believe, the offspring of the war of 1767-8, with Hyder Ally. One of a much later date, communicated by Mr. John Sulivan, contains the whole peninsula, south of the parallel of 15°; and is particularly valuable, on account of its having many routes and situations in Mysore, and Bednore; as well as in Tanjore and Madura. By its comprehensive nature, it furnishes an opportunity of proportioning the respective distances between Amboor, Bangalore, Seringapatam, Mangalore, and Bednore; as these places all appear in the same map, together with the routes from one to the other. It would require whole sheets to give an analysis of this, and the rest of the MSS. which

have been consulted on this subject, and therefore, I shall only state generally, that by the mean of the distance from Amboor to Bangalore, in four maps, it comes out to be 73,6 G. miles; (the variations between them, was six miles) and its parallel, according to the same method of proceeding, was 4′ 10″ south of Madras, or 13° 0′ 50″. To this may be added, that Chinna-Balabaram, is by the mean of the same four maps, 23′ 40″ to the north of the parallel of Bangalore: and the latitude of the former, which is fortunately preserved in the *Lettres Edifiantes*, being 13° 23′, confirms the general accuracy of the former result: this being only 1′ 10″ different from it; or 12° 59′ 20″. Lastly, the interval on Mr. Sulivan's map, between Bangalore and Bednore, is 176 G. miles; and in mine, when Bangalore is placed, as above (73,6 from Amboor; and in lat. 13°) 172,5. And again, the distance between Bangalore and Mangalore in Mr. Sulivan's map, is 176,5; and in mine, 169¼: that is, 7¼ different in one case, and 3½ in the other. And this difference is to be accounted for, by our giving a different degree of width to the peninsula: Mr. Sulivan's map making it 15′ 15″ wider than mine does, in the parallel we are speaking of. I have placed Bangalore in lat. 13°, and lon. 77° 37′ 10″, according to the above *data:* and this capital point, or *primary station*, being fixed with so much succefs, both in latitude and longitude, gives some degree of confidence to all the positions round it: for almost every position between Col. Kelly's line on the south, and the Tungebadra river on the north; has, in its construction, a reference to Bangalore. It is the common point of union, in the centre of the peninsula, as Coimbettore is in the S W; and Tritchinopoly in the S E.

Before I proceed to the detail of the remaining primary stations, in the peninsula, I shall observe at once, that all the roads and positions of principal places in the Mysore and Bednore countries, on the west of Bangalore; and between Roydroog and the parallel of Tellicherry; were furnished by the said map of Mr. Sulivan's: and

of which, I believe, there is no other copy in Europe. Chitteldroog, Shevagunga, Bankypour, Chennyroypatam, Ananpour, and many others, are quite new; and Sera, Sirripy, Roydroog, Rettingery, and Chenapatam, appear much more consistent in their positions, than heretofore: and although we cannot expect that either the positive, or relative distances, should be perfectly exact, yet I have every reason to think that they are not far from the truth; and that at all events, the present map affords the best materials that can be procured in this country.

Seringapatam is placed nearly in the position it occupies in Mr. Sulivan's map, in respect both to Bangalore and Mangalore. Its parallel is very uncertain, as there is no good line of distance, to check it, either from the north, or south. Mr. Sulivan's map places it 99 G. miles to the northward of Coimbettore; and Mr. Montresor's 87,4. As I have adhered more to the account of its relative position, in respect of Bangalore; it stands in the map, only 91 from Coimbettore. Besides, a MS. itinerary gives its distance from Sera, at 8 days journey, or 54 G. miles horizontal distance; which is perfectly consistent with the 91 miles from Coimbettore. It is placed in lat. 12° 31′ 45″, lon. 76° 46′ 45″.*

Sir George Staunton's journey acrofs the peninsula, from Madras to Mangalore, in 1783, as one of the commifsioners for negociating a treaty of peace with Tippoo Sultan, furnished a list of stages, and the estimated bearings and distances between them, the whole way. These, Sir George most obligingly communicated to me, together with his miscellaneous observations and reflections as he went along: and which, being written on the spot, and dispatched as opportunities offered, may be allowed to exhibit a faithful pic-

* Other accounts are as follow: a large map, which I consider as the first that was constructed from the materials, collected during the war of 1767-8; and which may be styled the *parent* of most of the others, that appear on different scales; gives 99,3 G. miles, west from Kistnagheri; and 2° north of its parallel. This would place Seringapatam 6 west of its position, in the new map. Montresor's map, gives 66 G. miles from Bangalore, and Mr. Sulivan's, 58¼. The first goes 9¼ beyond it; the other only 2.

ture of the mind that dictated them: and they afford a proof that a long journey, in which many things occurred that usually excite disgust, disappointment, and chagrin (not to mention fatigues and want of comforts); may be performed, not only without disturbing the tranquillity of the traveller; but in such a state of mind, as to leave him a sufficient portion of good humour, to enable him to amuse others.

The commissioners were conducted by a very circuitous route, as well as impeded in their journey: for after proceeding on the great road from Anicul towards Seringapatam, in a W S W direction, to Malavilly, within about 12 miles of Seringapatam; they were carried to the N, and N W, so as to leave the latter place, at least 25 miles to the southward of them. As far as these estimated bearings and distances enable me to judge, the positions of Anicul and Seringapatam, in the map, are too far to the west, by several miles, in respect of Caveripatam; the last point established in this route, with any degree of certainty. But the route is unfortunately, too crooked, to admit of its being applied as a corrective, in small errors of distance.

Seringapatam is the capital of Mysore, the dominions of Tippoo Sultan; and it is situated in an island of the Cauvery river, about 290 or 300 miles from Madras. It has little in it worthy of attention. Mysore, a town and fortified post, and as I understand, the ancient capital; lies about 8 miles to the southward of Seringapatam. Mr. William Townsend, of the East-India Company's civil service, who travelled from Onore to Bednore, and Seringapatam, was 11 days in travelling between the two latter places; which, however, cannot be more than 180 or 190 miles asunder. He represents the whole country he travelled through, as being open and fruitful: nor did he meet with any mountains between the Gauts and Seringapatam.

Darempoury, Caveripatam, Kistnagheri, and Changamah, are obtained by means of a map of the valley of Vaniambaddy (or the

Barra-maul*) which map includes in general all the fortrefses contained within the tract usually known by that name. This map is in Mr. Dalrymple's collection, and has much the appearance of general accuracy; the number of forts placed on rocky eminences, in and about it, affording an easy means of determining the relative positions, by triangles. The contents of this map are joined on to Amboor, a *primary station*; and I made no alteration whatever, in its scale or compafs. Darempoury, the extreme point in this map, to the S W, being thus obtained, stands more southwardly in respect of Arcot, than most other maps represent it: that is, the interval between Darempoury and Carroor, is lefs than is commonly reckoned; and that between Darempoury and Colar, lefs.

Cudapanattam and Vaniambaddy, were *set* from Amboor rock, and their distances taken from the MS. maps. The roads and places between Cudapanattam and Bangalore; as well as those between this last place and Condour; and also between Bangalore and Darempoury; are taken from the 4 MS. maps, from whence I have inferred the position of Bangalore: and I consider the places within this tract, to be ascertained with much more precision, than those on the south of Darempoury; and between it and Carroor, and Coimbettore: it being a more confined space, and also much oftener traversed, during the war of 1767. But to recount the particulars, would be both tedious, and uselefs: as the account would contain nothing more than a comparison of bearings and distances, and the mode of correcting, and working them up, into their present form: the labour of which, although compreffed within the compafs of a few inches, would scarcely be conceived, or believed. Although most, or all, of the roads that appear in the map, between Darampoury, Attore, Carroor, and Coimbettore, have been

* The name Barra-mahal, or Barra-maul, *anglice* the *twelve places*, was given it because it contained 12 fortrefses of some note (viz.), Kistnagheri, Jegadivy, Candely, Congoonda, Vaniambaddy, Mahrauzegur, Cockingur, Cooturagur, Bazingur, Tripatore, Tadcull, and Gigangurry.

marched over, either by British armies, or their detachments, at different times; yet seldom having a surveyor with them, or by the want of instruments, or leisure, or both; little has been done for geography, more than barely informing us that such roads and places exist. So that the whole country beyond the first ridge of hills from Arcot, and south of the Barra-maul, can be but vaguely described: no one point, as I before observed, having been mathematically determined, on the north of Carroor and Coimbettore: and was it not for the observation of latitude at Chinna-Balabaram, the position of Bangalore, and all the places dependent on it, would be involved in uncertainty.

The road from Seringapatam to Calicut, is from Col. Humberstone's report; and that from Calicut to Damicotta, is from Jefferies's old map. Of that from Seringapatam to Coimbettore, I have seen several copies: among which there are variations both in the scales, and in the names. Col. Wood went from the Barra-maul to Damicotta, Sattimungulum, and Coimbettore, in the course of his campaign in 1767: but I know not on what authority the road from Damicotta to Mysore, is described.

The determination of the positions in that part of the southern Carnatic, beyond the extent of Mr. Pringle's measured lines, was what interested me particularly: as from its vicinity to a principal settlement, and the scene of much warfare, it may be expected to be a subject of public curiosity. But even here, any more than on the farther side of the mountains, accuracy was not to be attained: for no position was determined mathematically, in the line between Tritchinopoly and Velore: nor even a single line measured from the sea to the hills, to determine the breadth of the Carnatic: nor even a series of triangles, although such a succession of tempting marks occur, throughout this whole space. The only particular that presented itself, in the shape of actual measurement, was Mr. Pringle's route from Tritchinopoly to Velore: but this was without bearings, save from the top of Tiagar hill, about midway

between: and which, from the greatneſs of the distance, could take in only a part of the line; that is, from Volconda to Trinomaly.

Changamah, as has been said before, is placed by the map of the Barra-maul, from the west: and as Trinomaly in the Carnatic, is not only very near it, but also an eligible *primary station*, it appeared, that if there was any tolerable authority for Trinomaly, the operation of fixing it, would at the same time verify Changamah, in respect to the eastern coast: which, considering the foundation on which it rested, appeared neceſsary.

Trinomaly hill, which is visible more than 40 G. miles, was found by trigonometrical proceſs (that is, by an angle of intersection of 20 degrees, from the hills of Wandiwash and Carumpaucum) to be 40 G. miles from the former, in the direction of W 28° S. I should not have been entirely satisfied with this result, had not the position thus pointed out, agreed nearly with the apparent situation of Trinomaly, in respect of Changamah. This is indeed given by Mr. Sulivan's map, at E 10 N, 13 G. miles; while the bearing of Collispauk from Changamah is N E 20,7; and that of Trinomaly from Collispauk, S 7 W, 12,6 G. miles. But, as Mr. Pringle measured that side of the triangle between Trinomaly and Collispauk, and found it only $11\frac{1}{2}$ G. miles (or 15 B. miles in *road distance*), the side between Changamah and Trinomaly ought to be only $10\frac{3}{4}$: and this I have adopted, with a small correction; as Mr. Pringle's bearing was S 12 W, instead of S 7 W, as in Mr. Sulivan's map. Sir George Staunton, who travelled along that side of the triangle, between Collispauk and Changamah, estimates the road distance at 19 B. miles; which by this construction, ought to be 23 at least.

Trinomaly, thus adjusted, is 52 G. miles, on a bearing of about W N W, from Pondicherry (the nearest point on the coast). M. D'Anville thought it no more than 48; and another French MS. map, which contains the southern Carnatic, and which has afforded

me much afsistance, only 43 G. miles: but the more modern maps, come nearer to my idea; Wersebe reckoning the distance 55, and Mr. Sulivan's map about 50. This station determines the breadth of the southern Carnatic; and also all the positions between Tritchinopoly and Velore. It will follow, also, that Tiagar, from whence the bearings of Volconda and Trinomaly were taken; as well as Volconda itself; must have an immediate dependence on Trinomaly. The position of Volconda, in respect of Tritchinopoly, would have been a desirable thing, in order to find how it agreed with the position deduced from Trinomaly; but this I could get no good authority for: and Mr. Pringle's bearing ought to have more weight than mere opinions. I have given the different accounts in a note, but without admitting them as authority.* M. D'Anville's, however, agrees with mine. Baron Wersebe's route, obligingly communicated by the Hon. Col. Cathcart (his Majesty's Quarter-master General in India), did not appear until the map was engraved. If Wersebe is right, I must have mistaken the position of Volconda; and placed it 7 miles N W by W of its true position. But Mr. Dalrymple, also, took the angles on Tiagar hill, and made the angle of Trinomalee and Volconda, the same as Mr. Pringle did, to three minutes of a degree.

Gingee is placed 30, and $32\frac{1}{2}$ G. miles from Pondicherry in two French MS. maps; and $36\frac{1}{2}$ in Wersebe's: one might expect that the French knew its position well. I have placed it 33 from Pondicherry; and 23 from Trinomaly.

The rest of the positions in the south Carnatic, as well as the courses of the rivers, and direction of the first ridge of hills, are taken chiefly from the three MS. maps beforementioned (viz.) D'Anville's, the old French MS. map; and Wersebe's: and some

* Bearing of Volconda from Tritchinopoly, by D'Anville, N 37° E.
By the other French MS. map N 36 30 E.
By Wersebe - - - N 25 15 E.
By Montresor - - N 28 40 E.
It stands in the map - N 37 E.

few particulars are from an engraved French map of 1771; whose principal merit is confined to the southern part of the Carnatic.

Carnatic-Gur, and Doby-Gur, two fortrefses of note, in the ridge of hills on the west of Arnee, have never been taken notice of in any former printed map. The latter is determined, as to distance from Velore, by a measured route of Mr. Pringle's: and the former had its bearing taken at Velore, and is known to bear about N by W, three miles distant from the latter: of course, two sides and an angle are given; and the two places mutually afsist in determining each other's position.

The Coleroone and Cauvery rivers, with their branches, below Caroor, are taken from the maps of Wersebe and Kelly; collated with the old French map. Wersebe's map of Tanjore, contains more particulars than any other that I have seen; especially in the northern part. And for the southern parts, I had some afsistance from the map of Mr. Sulivan.

More particulars appear in the Marawar and Madura countries, than in any former map that has been published. After the great roads specified in the discufsion of Kelly's map, &c. most of the new matter is from Mr. Dalrymple's collection; and the rest from Wersebe and Sulivan. The almost incredible number of forts and fortrefses of various kinds in the Carnatic, occasion a greater number of interesting positions within the same space, than in most other countries. Villages, and even towns, in open countries, are but of a day, compared with fortrefses; especially when they derive any portion of strength from their situation: a very common case here. Public monuments, too, the unequivocal mark of civilization and opulence, are more common here, than in the northern parts of India.

Madura and Tinevelly are chiefly from Sir J. Call's old map, with many additions from Kelly and Wersebe. The valley of Ootampaliam, inclosed between the branches of the Gauts, is a very recent acquisition to geography. Nor is this the only new matter

afforded us by Col. Fullarton's march (during the late war) into the southern provinces; the geography of which now wears an entire new face. The intention of this expedition was, to open a communication between the two coasts of Coromandel and Malabar; and at the same time to deprive Hyder Ally of the use of the valuable province of Coimbettore: and, if necefsary, to open a ready way into that of Mysore. We learn from him, what will appear a new fact to most readers, that of there being a break in the continuity of the ridge of mountains named the *Gauts*, opposite to Paniany. Governor Hornby, it seems, was apprized of this circumstance; and probably it was formerly known in Europe, though now forgotten. This *break* is about 16 miles wide, and appears to border on what D'Anville calls *Annamally*, or the *elephant mountains*, and is occupied chiefly by a forest of timber trees, which has the fort of Annamally on the east, and Palicaudcherry on the west. The valley or opening extends 14 or 15 miles, between the termination of the northern Gauts, and the commencement of the southern ones; before it opens finally into the low country on the Malabar coast. It is well known that ships which navigate the Malabar coast, during the N E monsoon, commonly experience a stronger gale in the neighbourhood of Paniany, than elsewhere; and I am of opinion that this opening in the Gauts, is a very sufficient cause for such an effect. I have been told also, that the lower part of the Coimbettore country, partakes of the rainy, or S W monsoon, of the Malabar coast: which may certainly be referred to the same cause.

The river of Paniany takes its course from the Coimbettore country, through this opening; and is said to be navigable in the rainy season, for small boats, to the foot of the Gauts; which is a circumstance worthy of being known, and which I was ignorant of, until I read the Life of Hyder Ally, published in France, in 1784. This circumstance, together with the inundated state of the country at that season, may serve to show, that the country

west of the Gauts, has no great declivity, in a course of near 60 miles.

The Paniany river, as well as that of Daraporum, has its source from an elevated plain, of about 60 miles in extent; and which stretches itself acrofs the eastern mouth of the gap or valley, before spoken of. This plain rises suddenly from the level of the surrounding country, like a vast terrace; and the forest bounds it on the west. There are examples of the same kind of elevated plains in Bengal; and in the Bundela country, south of the Ganges, near Soohagee Gaut.

The common boundaries of the Carnatic, and of Mysore, are tolerably well ascertained in the southern provinces;* and an approximation towards the truth, is made, in those of the Marawars and Tanjore; but on the north of the Cauvery, I believe the boundaries are very ill defined, even by the governing powers themselves; except in particular places.

On the west of the Gauts, and between those mountains and the lakes of Cochin and Travancore, there is nothing new. The country is chiefly one vast forest: and of course, scarcely inhabited, or known, as to particulars.

Terriore, or Tarriore, a fort pofsefsed by a rajah of some note, on the north side of the Cauvery, and at the foot of the first ridge of hills; has its position from the authority of the MS. maps abovementioned. They differ, in giving its distance from Tritchinopoly, from $22\frac{1}{2}$ to $25\frac{3}{4}$ G. miles: and from Ootatore, from 16 to $17\frac{1}{4}$.

Attore, a considerable post on the west of Tiagar, I found some difficulty in placing, from the discordancy of the different accounts: and indeed the whole tract beyond the first ridge of mountains beyond the Carnatic, is very vaguely described, both in point of

* Meaning those on the south of the Cauvery river. And the countries between the Cauvery and Guntoor, are here named *The Carnatic*, in a particular sense: and this is again subdivided into N and S, as the parts respect Madras.

particulars, and of geometrical exactneſs. With respect to Attore, which is the centre of several roads described in the map, I have placed it chiefly on the authority of Mr. Sulivan's map; as it corresponds with the bearing of the mouth of the paſs from Tiagar; as reported by Mr. Pringle. That bearing was W 13° 11′ S; and in Mr. Sulivan's map, it stands N 38 W, distant 28¼ G. miles from Volconda. It is placed in the map N 39 W, 28½ miles: 32½ from Darempoury; and 34 from Salem, or Sailum.*

A route of Baron Wersebe's, from Tritchinopoly to Tiagar; communicated by my friend Col. Cathcart, came to hand after the map was engraved; and therefore too late to enable me to correct Ootatore; whose position, by that gentleman's account, is more northwardly, in respect of Tritchinopoly, than I have placed it. The route in question was not measured; but it being very straight, there could be no difficulty in ascertaining the true bearing of it.

The principal settlements and commercial factories of the Europeans, in the peninsula, are all situated along the coast of the south Carnatic; or, as it is usually termed, the coast of Coromandel. Madras we have already spoken of: the English poſseſs also the fortreſs and city of Negapatam, situated on the coast of Tanjore; taken from the Dutch in the late war. It is a neat city, and a place of considerable trade: but more valuable from its local position.

Pondicherry is the principal settlement of the French in the Indian seas. Its general position has been discuſsed in page 13; and with respect to Madras, it lies to the south, distant 100 road miles; and at the mouth of the Gingee river. It was first settled by the French in 1674; and was then included in the rajahship of Gingee, subject to the King of Narsinga. Previous to the war of 1756,

* As it may aſsist some other person, who may undertake to correct this geography, I have inserted the following particulars, collected from different authorities: Mr. Sulivan's map places Attore, S 40° 30 W, 31 G. miles from Darempoury; and E 10° 20 N, 29⅛ from Salem. D'Anville's map of positions, N 37° 40′ W, 24½ from Volconda. And Montresor, E 42° 50′ S, 18 from Darempoury.

Pondicherry was, perhaps, the finest city in India. It extended along the sea coast about a mile and quarter, and was about three quarters of a mile in breadth: was well built, and contained many public buildings; and a citadel, then the best of its kind in India, but of too contracted dimensions. This fine city was first taken by the English, in 1761; and was immediately razed to the ground, in retaliation of M. Lally's conduct towards the fortifications and buildings of Fort St. David, in 1758. This proceeding of M. Lally, was agreeable to a system adopted by the French East-India Company in Europe: and which had its foundation in commercial jealousy.* However, the consequent destruction of the French settlement of Chandernagore, might have glutted our revenge for the loſs of Fort St. David: and we should have been content with dismantling Pondicherry. The French have also factories at Cuddalore, and at Carrical: the former within sight of Pondicherry: the latter in the Tanjore country. Cuddalore is naturally a very strong situation: and would have been the most commodious, perhaps, for the chief British settlement; since the security of Tanjore, and the conveniency of supplies from it, must ever be a capital object. Besides, as the S W monsoon is the season of naval warfare, Pondicherry has the advantage of being to windward of Madras; and the French, at the same instant, accomplish the double purpose of keeping to windward, and of protecting their capital settlement: and receive aſsistance from it in return. The British fleet, in order to watch the enemy, retires 100 miles from their principal settlement; and receives only a precarious aſsistance from the shore: that is, from Cuddalore, or its neighbourhood, their usual station.

The Dutch poſseſs on this coast the towns of Pullicate, Sadras, and Portonovo; each of which has a small fort to protect it, against

* If we are to judge of the degree of turpitude of a crime, by the mode of punishing it, rivalship in commerce should be one of the most heinous crimes in nature: for nothing leſs than the most flagitious, and universal criminality, can authorize the destruction of the habitations, and the consequent dispersion of the inhabitants, of a great city. The fate of Rome might be involved in the existence of Carthage: but the question here, was only which of the two parties should purchase callicoes at the cheapest rate, or sell them at the dearest.

the consequences of any desultory irruption, or the quarrels of petty chiefs: but which could make no stand against a regular army. The Danes have also a settlement of the same kind, at Tranquebar, within the confines of Tanjore.

For an account of the cities of Tritchinopoly, Tanjore, Madura, and the stupendous pagodas of Seringham, &c. I shall refer the reader to Mr. Orme's elegant and faithful History of the Military Transactions of the British Nation in Hindoostan.

When we turn to the north of the parallel of Madras, the subject appears to be more barren of matter, of every kind, than in the south: and among the little that does appear, there is a still smaller proportion of actual survey. The Jaghire map, and the marches surveyed by Mr. Pringle, do not extend far to the north of Madras. There is indeed, Col. Pearse's line of march, that way: but it furnishes only an outline; for it never deviates far from the coast. The matter before us, is confined chiefly to the eastern half of the peninsula; and the farther we recede from the coast, the more scanty are the materials, and the less to be depended on.

The authorities for the course of the Kistnah river, which bounds on the north, the tract which is the subject of this Section, will be found at the end of the fourth Section: and I shall now proceed to give an account of the authorities on which the remaining primary stations, between the parallel of Madras, and the Kistnah, are founded.

On Dalmacherry and Gooty, depend the whole course of the Pennar river, from its source to Cuddapa; together with all its branches, and the different positions near them; such as Cuddapa, Tripetty, Chandeghere (or Kandeghere), and Calastri.

There is a diversity of opinion concerning the position of Dalmacherry, as there must ever be, when the distance and bearing of a place, have not been mathematically ascertained. A curious MS. communicated by my friend General Caillaud, entitled, "*An Account of the Passes between the Parallels of Udeghery and Sautgud,*"

and from which I have received great afsistance, has the distances in computed miles from one pafs to another, and oftentimes from some distant capital place also; but without bearings. This MS. gives the distance of Dalmacherry, at 75 British miles of road distance, or about 56 G. miles of horizontal distance, from Arcot. Montresor's map gives 64, and Mr. Sulivan's 61½. Montresor, also, places it 47½, in a N N E direction from Cudapanattum; and Mr. Sulivan 47. I have placed it 56½ from Arcot, in a N N W direction; which makes the interval between it, and Cudapanattum, 46½: and its latitude is 13° 43′ 30″. There are three important pafses leading from this place, into the Mysore and Cuddapah countries: and here it was that Doast Ally, the Nabob of Arcot, was surprised and defeated by the Mahrattas, in 1740.

Gooty or Gutti, is a strong fortreſs on a hill, beyond the river Pennar,* and towards Adoni; and formerly the seat of government of Morari Row, a Mahratta prince. This place, together with the course of the Pennar, is found in Montresor's map; which contains more particulars in this part of it, than any other map I have seen. But a difficulty arose in adjusting the position of Gooty, in my map; because the distance between Dalmacherry and Chinna-Balabaram is much leſs in *it* (13 miles) than in Montresor's; and Gooty appears to be ascertained by two lines, drawn from those places: so that either the bearings, or the distances, must be rejected. I thought it the safest way to adhere to the distances: as it is probable they might have more weight, than the bearings had, with Mr. Montresor, who adjusted this circuitous route, between Arcot and the head of the Pennar. His scale gives 112,2 G. miles, on a bearing of N 3 E, from Chinna-Balabaram to Gooty; and 118,5, N 43° 45′ W, from Dalmacherry to the same place. The intersection of the bearings (which make an angle of about 40°) would place Gooty in lat. 14° 58′: and that of the distances, in

* Or Pen-aur. I believe the term *aur*, for river, which prevails generally throughout the Carnatic, is not found any further to the north than Nellore.

15° 15′; and nearly in the meridian of Chinna-Balabaram. I have preferred the latter, for the reason abovementioned.

The inferior branches of the Pennar are taken from D'Anville's map of 1752: but Tademeri, Anantpour, &c. are from the Universal History. Gandicotta, on the south bank of the Pennar, is remarkable both as a strong fortreſs, and for having a diamond mine near it: a particular account of it, will be found in Tavernier. Penuconda, a considerable place near the Pennar river, is said to be 20 leagues N E of Sirpy, and 20 N N W of Chinna-Balabaram. This account, also, is in the Modern Universal History. Cæsar Frederick mentions it as the retreat of the King of Bisnagur (or Narsinga), 8 days journey from Bisnagur.

The Pennar river, after springing from the neighbourhood of the Balabarams, runs directly northward, until it approaches Gooty; and then takes a S E course by Gandicotta and Cuddapah: after which it changes to the east, and reaches the sea at Gangapatnam, after paſsing the fort of Nellore. The MS. account of the paſses, remarks that this river is 300 yards wide at Sami-Iſsuram, about 70 miles from the sea; although it is confined in its course, by hills, on both sides.

It has been observed in the first Section, that Capt. Ritchie's chart of the coast of Coromandel, made the point at the Pennar river, project too far out. I find by a reference to 6 different MS. and printed maps of this part, that the distance of the sea from Nellore, is not represented in any of them, at more than 13½ G. miles, and most of them allow only 12. And although I have allowed 16, it comes considerably within Mr. Ritchie's account.

Cuddapah is determined by the map of the Pennar river: and the construction agrees with its reputed distance from Arcot in a *Malabar* map; or rather a map drawn by a native of the Carnatic. It is there stated at 60 coſses; which on the scale adopted for the Carnatic (in page 5), and which allows only 37½ coſses to a degree, will correspond with the 96 G. miles, arising on the construction.

Tripetty and Chandeghere (or Kandegheri), the first, a famous place of Hindoo worship; and the latter, the site of the capital of the ancient kingdom of Narsinga, are placed with reference to Dalmacherry, by Montresor's map; and by the MS. account of the paſses. Kandegheri is there said to be 22 B. miles (road measure) from Dalmacherry, bearing about E N E; and Tripetty is 3 miles S E from Kandegheri. I have placed Tripetty accordingly: and it stands in the map 53½ G. miles, nearly north, from Arcot; and about 66, nearly N W by W, from Madras. Mr. Orme supposed it to be 50 miles N E of Arcot: and the Universal History says it is 22 leagues W N W from Madras.

Calastri appears also in the map of Montresor. There is also a route of General Caillaud's from Polypet to Udegheri, and Nellore, paſsing through Calastri. I have endeavoured to fix the position of Calastri, by these joint authorities; and have placed it 15 G. miles E N E from Tripetty; and 61 from Arcot: but I have my doubts concerning the accuracy of its position.

Sami-Iſuram paſs, on the Pennar river, is reckoned in the MS. of the Paſses, 55 B. miles, or 44 G. miles horizontal distance, west from Nellore; and this position is corroborated by Montresor's map (as far as the apparent rudeneſs of his materials for this part, may be said to confirm any position), and I have placed it accordingly. It comes within about 15 G. miles, or 9½ coſses of Cuddapah; which bears from it W S W.

Udegherri and Sangam, two places in General Caillaud's route, are corrected by Col. Pearse's position of Nellore; and by the relative positions of Sydaporum and Nellore, in a French copy of M. Buſsy's marches: Sydaporum being also a position in Mr. Caillaud's route. I am conscious how incomplete the northern part of the Carnatic is, in comparison with the ſouthern part: but all my inquiries have produced nothing satisfactory, on the N W of Polipet. Had the route of General Caillaud been measured, it would have produced several *primary stations*: but as

it is, the scale appears to be ill proportioned in the different parts of it.

Narnaveram and Bomrauzepollam, are both placed on the authority of Mr. Pringle's observations: and the Pullicate lake is from the Jaghire map; Col. Pearse's route; and other authorities. This lake, called by D'Anville, *Ericans*, seems to owe its existence to the same cause as the Chilka lake; that is, to the sea's breaking through a low sandy beach, and overflowing the lands within; for its communications with the sea, are extremely narrow, like the *embouchures* of small rivers. This lake is in extent 33 B. miles from N to S, and 11 over, in the broadest part; and contains some large islands within it. One of these is named Ircum, in Mr. Barnard's map of the Jaghire, published by Mr. Dalrymple: and as M. D'Anville names this island, as well as the lake, *Ericans*, I conclude it to be a corruption, or misconception of *Ircum*.

I have not found it an easy task to fix the positions either of Innaconda, Combam, Adoni, or Canoul. On these four places, many others depend, in the construction of the map; and they are neither of them ascertained to my satisfaction. There is, in particular, a degree of obscurity in the accounts of Canoul, that I cannot clear up. My local information fails me entirely, in this place: and this kind of knowledge is so requisite to a geographer, that no degree of study or investigation, can compensate for the want of it. It not only enables him to reconcile names and situations; but oftentimes furnishes him with a criterion to distinguish the value of his materials. Few Europeans, vagrant ones excepted, have visited these places since the time of M. Bussy (1751), and it is a misfortune to geography, that his marches between Arcot, Hydrabad, Adoni, Canoul, and Seringapatam, have not been recorded, in the same intelligent manner, as the rest of his marches have been; and from whence we have drawn so much information. But, however I may repine, as a geographer; I ought, perhaps, as a philosopher, to be satisfied, that so much has been preserved.

Innaconda (called also Viniconda, and Huiniconda) is a fortrefs on a hill; within, or bordering on, the Guntoor circar. It is undetermined, as to its precise bearing, from any known place: therefore I have been reduced to take it on the authority of some vague maps, and by a reference to circumstances: and have placed it about N W by N from Ongole (a point in Col. Pearse's route). Mr. Pringle measured the road, and found the distance to be 46½ B. miles; for which I allow 36 G. miles, in horizontal distance. By the *Malabar* map, it is 28 cofses, which may be reckoned about 45 G. miles. It is somewhat more westerly in bearing, and also more distant, from Medipilli, than from Ongole.

Combam is reckoned 25 cofses from Innaconda; and 32 from Ongole; or about 51 G. miles from the latter. It is placed in the map, at 48 miles distant, and nearly west, from Ongole: but as its parallel is regulated by the afsumed position of Innaconda, it is subject, of course, to the same errors. Tavernier's route from Gandicotta to Masherlaw, pafsed through Combam (which he calls Kaman), and its position accords very well, with the proportion of distance afsigned it. More will be said on this subject, hereafter.

Adoni is reckoned to be 66 cofses from Combam, by the Malabar map; and 67 by a route transmitted by Col. Harper to the Madras government; and which was collected from the information of his guides, while at Innaconda, in 1781. These cofses on the Carnatic scale (37½ to a degree), are equal to 106 G. miles; and this is the distance allowed in the construction, between Combam and Adoni, westward. And for its parallel, no better authority can be found, than its distance from Gooty, which is situated to the S E of it, two days journey, or 36 G. miles, according to my calculation; which is founded on some considerable degree of experience in these matters. Adoni, thus placed, is 63 G. miles N N E from Roydroog, and about 44 south of the Kistnah river.

Adoni, as to general position, is about the middle of the peninsula, and exactly in the parallel of Goa. It was, not many years ago, a fine city, and extremely well fortified, situated on the side of one of the branches of the Tungebadra * river; and the capital of a small principality, or rather feudatory province, of Golconda. A part of its history will be found in Mr. Orme's works. It was since assigned, together with Rachore, and Guntoor, to the late Bazalet Jung, brother to Nizam Ally, the reigning soubah of the Deccan. Hyder's desperate grasp fixed on this, as well as the rest of the provinces on the south of the Kistnah, previous to the late war: but all of them were, or ought to have been, restored by the peace of 1782. Adoni certainly was: because the attack of Adoni, then in the hands of the Nizam, was one of Tippoo's exploits, last year (1787).

The position of Canoul appears the most uncertain of all. The authorities for it are, the Malabar map, in which its distance from Rachore, Cuddapah, Adoni, and Combam, are given in cofses; but the intersections of these from the different points, do not agree. The map alluded to, is not constructed by a scale, but rudely sketched out, without much proportion being observed either in the bearings, or distances of places, from each other: and the names, and the distances between the stages, are written in the Malabar language. Canoul is there said to be 57 cofses from Cuddapah; 38 from Combam; 28 from Rachore; and the same from Adoni: and 36 from Timapet, a place that occurs in General Joseph Smith's route from Hydrabad to Sollapour. By this account, the number of cofses between Cuddapah and Rachore will be 85; which is really the distance on the map, within two cofses; reckoning $37\frac{1}{2}$ to a degree. Nor are the crofs distances from Com-

* I suppose the termination *badra* in the name of this river, means the same as the *budda* or *buddar* in Nerbudda, and Soanbudda, in the north part of the Deccan, and in Hindoostan. If the supposition be true, that the names of large rivers undergo little alteration, the language to which *Gonga* or *Gang* belonged, must have had a wide range; since we find it applied both in Ceylon, and at the foot of mount Himmaleh.

bam, and from Adoni, far out; but that from Timapet is irreconcileable. However, as the position of it agrees pretty well with Cuddapah, Rachore, and Combam, it may be concluded that the distance of Timapet is falsely given. In a map of M. Bufsy's southern marches, said to be composed by M. D'Anville, Canoul is represented in a very different position from the above result; for there it stands only 18 cofses from Rachore, instead of 28.

Condanore is 15 cofses to the east of Adoni, according to Col. Harper's route.

Rachore, or Adoni-Rachore, a city, on or near the south bank of the Kistnah river, and not far above the conflux of the Tungebadra with it, and below that of the Beemah, has its position from the map of M. Bufsy's northern marches.

Rachore is four days journey from Adoni, according to the report of an European who travelled it. This person came from Seringapatam, by way of Sera and Gooty, to Adoni; and communicated this, and several other particulars in his itinerary, to Mr. W. Townsend; who obligingly gave them to me. It is reckoned three days journey from Seringapatam to Sera (or Merki-Seray), six more to Gooty; two from thence to Adoni; and four more to Rachore. If we take the whole distance through these several points on the map, the produce will be 276 G. miles. A day's journey for an ordinary traveller, may be fixed at 22 British miles, in road distance; which reduced to horizontal, will be 17 to 18 G. miles: and it will be found that the 276 miles will be nearly 15 days journey, at that rate: and the intervals are generally well proportioned. Although 22 miles are stated to be a day's journey for an ordinary trave ll; yet a cofsid or courier goes ordinarily from 30 to 33 British miles in a day: and that for many days together.

Timerycotta, a considerable fort in the Palnaud country (which is a district belonging to the Carnatic, but situated towards the Kistnah river, on the west of Guntoor) governs most of the positions in Guntoor and Palnaud; as also the crofsing-place of the Kistnah, in

the road from Madras to Hydrabad. In Montresor's map there are a number of places round Timerycotta; but they have no connection with any other known place. Capt. Davis, in his account of the places in and about the Guntoor circar, says, that Timerycotta is 40 cofses west from Guntoor fort: and Guntoor is placed by the Malabar map nine cofses from Sattinagram; a place on the south bank of the Kistnah, opposite Bezoara; a point ascertained by Major Stevens. The bearing of Guntoor from Sattinagram, we can only infer, from its lying in the direct road to Ongole, to be about SW: but it is strongly corroborated by Montresor's map, which gives the distance between Guntoor and Siccacollum (another fixed point on the Kistnah), at about $25\frac{1}{2}$ G. miles. Timerycotta, then, is placed according to these *data*, in respect of longitude: and is 89 G. miles to the westward of Siccacollum; or 64 from Guntoor, which answers to 40 Carnatic cofses. With respect to its parallel, the Malabar map gives only a circuitous route of 49 cofses to it from Ongole. Mr. Montresor's map makes the distance to be 66 G. miles from Ongole; and the bearing about NW by N: but, as I said before, the connection between these places is imperfect, in his map. Capt. Davis's map (or rather sketch) has it at 57. Again, Montresor makes Guntoor and Timerycotta, nearly under the same parallel, which would reduce the distance to 59. I have allowed $60\frac{1}{2}$: and have been guided principally by the computed distances in the Malabar map, applied to Capt. Davis's bearings, in his circuitous route from Ongole to Timerycotta: and this position agrees nearly with Montresor's idea.

Montresor's map, as is said before, contains many positions round Timerycotta, to the extent of 20 or 30 miles: among others, Currumpoody, Patack, Pongallah, Pulredygur, and Masherlaw, or Macherla. This last place, together with Combam and Doupad, from other authorities, helps me to trace out the route of Tavernier from Gandicotta to the Kistnah, in his way to Golconda, in 1652. Combam, or Commum, is the same with his *Kaman*, said

to be the frontier town of the Carnatic, towards Golconda. Deopad, is what he calls Doupar; situated, according to his account, in a country that is intersected by many torrents from the neighbouring hills. Col. Harper makes the same remark on Doupad or Deopad: and these torrents help to form the river Gondegama (or Gondlacomma) which gains the sea at Medipilly, and is the nominal boundary of the Carnatic. The Malabar map writes it *Gilligama*, and other accounts give it *Gunta-camma:* Gondegama, is the common name. Combam is situated near its source. Tripanty pagoda lay near Tavernier's route, and is a few miles to the north of Doupad. Some have confounded this with *Tripetty*, a more celebrated pagoda in the vicinity of Chandeghere; and 160 miles to the southward of Tripanty. Tavernier's next stage is *Mamli*; which may be recognized in D'Anville's map of Coromandel, under the name of *Mamenda*. His Macheli, is, no doubt, Masherlaw: soon after which he arrived at a large river; which was the Kistnah. It is singular that his curiosity should not have led him to inquire the name of the most capital river, that occurred during his journey.

Tavernier's route would hardly be worth remarking, did not his distances help to corroborate generally, the positions of Combam and Timerycotta. He reckons 77 *leagues* from Gandicotta to Masherlaw: 42 of which are between Gandicotta and Combam. These leagues, I apprehend, are meant for cofses; a common error of Tavernier's: and it is remarkable that Thevenot falls into an absurdity of the same kind, by reckoning cofses for half leagues. How men of sense and reflection can apply the names of the itinerary measures of their own country, to those of another, when the scale differs so widely, I confefs I am at a lofs to account. Cofses and leagues, differ at least a third part, in their length: how then can Thevenot say, that a cofs is equal only to half a league? Tavernier's whole number of leagues from Gandicotta to Golconda, is 119; and the real distance, through the points of Combam, and

Masherlaw, only 176 G. miles: it will follow then, that not'ing more than cofses could be meant, and those rather short than otherwise. Between the Kistnah and Golconda, his account gives 39 leagues or cofses, which interval is 60 G. miles, by my construction. There must, however, be an error in the distance between Masherlaw and the Kistnah, which he reckons only three leagues (*i. e.* cofses); whereas, it cannot be lefs than seven cofses.

The fort of Condavir is the principal post in the Guntoor circar; and is strongly situated on a mountain, eight cofses to the west of Guntoor, according to Capt. Davis, and 10 from the south bank of the Kistnah. The position of Mongelgary, I am not satisfied about, as there are great contradictions in the accounts of it. Colore is from D'Anville: it is a diamond mine on the southern bank of the Kistnah, and not far from Condavir. Chintapilly and the roads in Guntoor, are from Capt. Davis's sketch, and the Malabar map.

I could get no better authority for the road from Nellore to Hydrabad, than what appears in D'Anville's Coromandel, published in 1753. I have altered the proportion of its parts, by changing the place of Podalah (his Poudela), as it is known to be 12 cofses, nearly W by N from Ongole, instead of the northern position he has given it; for want of such a check as I was enabled to apply, by being in pofsefsion of a route acrofs, from Ongole to Combam. It is very extraordinary, considering the long intercourse that the English at Madras, have with Hydrabad, that there should be nothing better of the kind, on record.

The road from Udegherri to Ongole, is also from D'Anville.

Sanore-Bancapour is from M. Bufsy's march, as has already been observed, in the fourth Section, page 249. Sanore and Bancapour, are two forts, lying about three cofses from each other; at 120 G. miles, nearly east from Goa. Mr. Ewart procured (while at Nagpour) a route from Hydrabad to Sanore-Bancapour, and from thence to Chinaputtun, a city, with a fort of stone; and situated 37 cofses beyond Bancapour. There is nothing to guide the judg-

ment in determining the general bearing of it, further than that we may conclude it to be to the westward of Sanore-Bancapour, because the road from Hydrabad leads through it; and as the Sanore river (the Toom) was crofsed nine cofses beyond Bancapour, it may probably bear to the northward of west from it, as the rivers in that part, run to the southward of east (see the map). The distance between Hydrabad and Bancapour (133 cofses) determines the scale of cofses to be at the rate of $39\frac{1}{4}$ to a degree; so that Chinnaputtun is about $56\frac{1}{2}$ G. miles from Sanore-Bancapour; most probably in a W N W direction. We learn one interesting particular, if true, from this route; which is, that the Nizam's territories extend 31 cofses beyond Bancapour.

Bisnagur, or Bijinagur, the capital of the ancient kingdom of Narsinga, is situated near the western bank of the Tungebadra river, and about 30 miles S E or S S E from Bancapour. It was visited by Cæsar Frederick in 1567; and was then a very large city. He reckons it eight days journey from Goa, which, by the calculation in page 287, should be 140 G. miles; but it is only 130 by construction. We are told by Ferishta, that Bijinagur was founded by Belaldeo, King of the Carnatic, in 1344. The Carnatic then included the whole peninsula; or, at least, all that lay to the east of the Gauts. Our histories of the Deccan and Carnatic are very imperfect; and at this day we can hardly distinguish between the kingdoms of Bisnagur and Narsinga; and whether they were two succefsive, or two co-existing kingdoms. It appears probable, however, that in the 16th century, the kingdom of Bisnagur included the greatest part of the peninsula; and that on the invasion of the King of Visiapour, and other northern princes of the Deccan, the King of Bisnagur retired, first to Penuconda, and then to Kandegheri (or Chandegheri); but still preserved his ancient title of Bisnagur. In 1599, Kandegheri was the residence of a Hindoo king, whose dominion extended over Tanjore and Madura; and

in 1640, a descendant of this prince reigned there: and permitted the English to settle at Madras.

Ranni-Bednore, as well as the heads of the Tungebadra river, are from M. D'Anville. We know generally, that this river is formed out of several smaller ones, that iſsue from the eastern side of the Gauts, in and about the Bednore country. Farther down, it paſses Bisnagur (as is said above, although Cæsar Frederick calls the river of Bisnagur, Nigonden), and between that and the Kistnah, it receives the Hindenny, or Endri river, which paſses by Adoni; as well as several smaller rivers. The general course of the Tungebadra is represented in the map of M. Buſsy's northern marches: and that of the Hindenny is marked more particularly, in the map of his southern marches, by D'Anville. It is also described in the map communicated by Mr. Sulivan, as paſsing under Chitteldroog, Rydroog, Chitrigally, &c.

M. Buſsy's route from Seringapatam to Adoni and Rachore is not to be found in the map of his other marches Those who cast their eyes on that naked part of the map, will regret its being wanting.

The route from Goa to Galgala is from Mr. Dalrymple's collection; and appears to have been travelled by some Portuguese, who visited Aurungzebe's camp on the Kistnah, in the latter part of the last century; or early in the present.

The environs of Goa and the country to the foot of the Gauts, are from a Portuguese MS. It is from Goa only, if from any quarter, that we are to expect the geography of the tract between the Gauts, Visiapour, and Adoni; and which yet remains almost a perfect void, in the map.

The general courses of the rivers in the peninsula, indicate that a ridge of high land runs directly acroſs it, from Calastri to Mangalore: but if we are to trust report, the country has not a hilly appearance between the Gauts and Bangalore; but that rising

suddenly from the west, at the Gauts, it declines gradually eastward: so that the Gauts form a sort of a terrace on an immense scale.

The Gauts are marked only in certain places where the different roads crofs them, or where they have been viewed from the coast. This famous Apennine, which marks, with more precision, perhaps, than any other boundary whatever, the line of summer and winter, or rather of dry and wet; extends 13 degrees of latitude; that is, from Cape Comorin to Surat (with the exception of the gap mentioned in page 276), at unequal distances from the coast: seldom more than 70 miles, and commonly about 40: and within one short space only, it approaches within six miles. Although the altitude of these mountains is unknown, yet it is sufficiently great to prevent the great body of clouds from paſsing over them; and accordingly, the alternate N E and S W winds (called the monsoons) occasion a rainy season on one side of the mountains only; that is on the windward side. It would appear, though, that clouds enough do paſs over, to occasion a rainy season, at a considerable distance to leeward, where those clouds descend: as we may suppose them to do, although at the time they paſsed over the Gauts, they must neceſsarily have been too high, and of course too light, to condense and fall in rain, there. This, I am led to consider, by Lieut. Ewart's account of the weather at Nagpour, in the very centre of India; where the seasons differ but little from their usual course in Bengal, and on the western side of India: that is, the S W monsoon occasions a rainy season: but the rains are not so violent, nor of such long continuance, as in those places. At the mouth of the Godavery river and its neighbourhood, the S W monsoon occasions a rainy season also; and the Godavery is then swoln, and overflows: and this part is about as far to leeward of the Gauts, as Nagpour is. It is poſsible, however, that the clouds which occasion a rainy season at the mouth of the Godavery, may come from the east of Cape Comorin:

though I rather believe the contrary, as the Cape bears S S W from it, and the reigning winds are much more westerly. The Nagpour clouds, however, must pafs over the Gauts. We may, I think, conclude then, that the ridge of the Gauts shelter a particular tract only; beyond which, the light and elevated clouds that pafs over it, descend in rain. Madras is within the limits of the sheltered tract, though at least 300 miles to leeward of the Gauts: Rajamundry (near the mouth of the Godavery) and Nagpour, may be about 500. It would be curious to know the exact limit of wet and dry. If I mistake not, until lately it was a general opinion, that the Gauts extended from the northern (or Bootan) mountains to Cape Comorin; and occasioned a diversity of seasons, at one and the same time, throughout all India. But the truth is, that different seasons exist at the same moment, only in a part of the peninsula: for the cause ceases in the parallel of Surat; where the S W wind, no longer opposed by a wall of mountains, carries its supplies of moisture uninterruptedly, both far and near, over the whole face of the country. For some particulars respecting the northern extremity of the Gauts, see page 258.

As the peninsula, or tract discufsed in this Section, contains more interesting matter than could well be comprized within the space furnished by such a scale, as could conveniently be applied to a general map, of so large a tract as India; it was judged necefsary to form another map of the peninsula, on a larger scale. Those who may become pofsefsed of it, will find the account of its construction in this Memoir: which is common to both maps, throughout this whole Section; and also in the first Section, as far as the map of the peninsula is concerned. The scale of this map, is just double that of the general one.

SECTION VI.

The Countries between HINDOOSTAN *and* CHINA.

IT has been said before (page 48), that the first ridge of mountains towards Thibet and Bootan, forms the limits of the survey to the north: to which I may now add, that the surveys extend no farther eastward, than to the frontiers of Aſsam and Meckley.

The Jesuit's map of China, as given in Du Halde, places the western boundary of Yunan (the westernmost of the provinces of China) between the 97th and 98th degrees of east longitude, in the parallel of 24°: so that the eastern frontier of Bengal (Silhet) is within 350 British miles of the western part of China; or to speak comparatively, the same distance as Silhet is from Calcutta. Here one is apt to wonder, that considering their proximity to each other, there should be no communication between the two countries. The reasons probably are, that Yunan does not produce such manufactures as are in request among foreigners; and that the courses of the great navigable rivers in those parts, are unfavourable to a communication by water. The space between Bengal and China, is occupied by the province of Meckley, and other districts, subject to the King of Burmah, or Ava.

The river *Nou-Kian*, little, if at all, inferior to the Ganges, runs to the south, through that angle of Yunan which approaches nearest to Bengal; where the Jesuits, who formed the map of China, left it, in its course to the south-west. This river, M. D'Anville conceived to be the same with that of Pegu; in like manner

as he supposed the Sanpoo to be the Ava river: but succeeding accounts have left no doubt remaining, that the Nou-Kian is the river of Ava. In the Modern Universal History (Vol. VI. p. 205) is an account of a voyage performed on this river, by four Chinese, about the middle of the last century. They went from Yunan to Yuntchian, and from thence to the frontiers of Ava; where they embarked, and went down the stream to the city of Ava.

In my account of the construction of the sea coasts (page 39), my authorities for describing the *delta* of the Ava river, from the sea, to the parallel of 18°, are given. The Dutch MS. map there quoted, describes the whole course of the river, as high up as the city of Ava itself; which it places in latitude 21° 48′; and also says in a note "*by observation:*" and indeed, the whole scale of the map seems to be formed from the difference of latitude.

The difference of longitude, as inferred from this Dutch map, places Ava in 97°. But Capt. George Baker, of whose accuracy I entertain a high opinion, took the bearings, and estimated the distances, the whole way from Negrais to Ava; and the result, corrected by the observation at Ava, 21° 48′, gives the longitude 97° 45′: and this longitude I have adopted. Capt. Baker's estimation of the courses and distances between Negrais and Ava, placed the latter in lon. 97° 54′, lat. 22° 5′; or 17′ to the north of the observation, recorded in the Dutch map. This error, on a distance of about 400 miles, is trifling; being less than a 20th part.* Ava

* Lest the particulars from whence the river of Ava, &c. is constructed, should be lost, I have recorded them here.

From Negrais to Persaim	NNE 45 G. miles.	Camma to Meachagong	N by E 20 G. miles.
Prygge -	NNE 45	Mellone -	NNE 35
Head of Negrais river	NE 60	Raymangong	NNE 35
Lundsey - -	N 35	Salhumea -	N 25
Saladun -	NNW 25	Youngeve	NE by N 25
Prone - -	NE 18	Ava -	ENE 70
Camma -	N by E 15	Monchaboo -	N 45

The whole traverse gives a course of N 27° 30′ E, distance 408 G. miles. The distance corrected, is 389.

The Dutch map gives a bearing of N 35° 50′ W, distance 80,3 miles, between Syrian river point (meaning the point of conflux of the Syrian and Dogon rivers), and the head of Negrais river; the upper point of the delta.

stands in the old maps, in lat. 25° 20′, lon. 96° 36′. The particulars of the course of its river, I have taken from the Dutch map; as Capt. Baker describes only the general direction of it.

Monchaboo, a city, and the residence of the King of Burmah, or Ava, in 1755, is by Capt. Baker's account, 38½ G. miles north from Ava: and this was the extreme point of his travels that way.

The Nou-Kian is named Irabatty by the people of Ava; and is said by them, to be navigable from the city of Ava, into Yunan. Monchaboo being within 130 B. miles of the Chinese frontier, we want only so much, to complete the course of the river in the map. This break is there described by dotted lines.

Capt. Baker describes the country bordering on the Ava river, from the sea to Lundsey, as being very flat, and the soil rich: and, I suppose, like that at the lower parts of the courses of the Ganges, Indus, and other capital rivers, formed out of the mud deposited by the inundations of the river. This low tract is named Pegu, and formed an independent kingdom in 1754, when it was reduced by the King of Burmah, to the state of a dependent province.

Burmah borders on Pegu to the north, and occupies both banks of the river, as far as the frontiers of China. On the north-west is Meckley, which we have before taken notice of: and on the west Aracan (or Reccan) and Roshaan. On the east, it has the kingdom or country of Upper Siam; which, Capt. Baker informs us, begins at a small distance eastward from the city of Ava: a ridge of mountains separating it from Burmah and Pegu.

The King of Burmah, whose reputed capital is Ava, and from whence the whole kingdom, though erroneously, is often denominated, is said to posſeſs not only the country of Meckley, in addition to those of Pegu and Burmah; but also the whole tract which lies on the north of it, between China, Thibet, and Aſsam. Du Halde's map speaks positively, as to this point; but with what

truth I know not, as I have never been able to gain any information on the subject.

Capt. Baker informs us, that the country of Burmah, adjacent to the banks of the Irabattey, or Ava river, between Pegu and Monchaboo, is in some places hilly, and in others flat; but not so low as to suffer inundations. Its produce is, in most respects, nearly the same, as that of the countries contiguous to the Ganges; and, it is remarkable, that the lands which produce the greatest quantity of saltpetre, are much about the same distance from the sea, as those of the same nature near the Ganges, and Indus.

Mr. Verelst, who meditated an expedition into Meckley from Bengal, and actually advanced as far as Cospour on his way to it, in 1763; was informed by his Meckley guides, that after passing the first ridge of mountains beyond Cachar, he would find a fertile and well inhabited country all the way to Ava. He, however, went no farther than Cospour; but the particulars of the road between that place and Ava, are described from the intelligence furnished by the guides who attended him.

The country of Burmah produces some of the best teek timber in India. The forests which produce this most useful and valuable article, are situated between the western bank of the Ava river, and the country of Aracan; and are only 250 miles from the sea, by the course of the river.

The Sanpoo, or Thibet river, was supposed by M. D'Anville to be the same with that which is called, in the lower part of its course, the river of Ava: but we have not the least doubt at present, of its being the same with the Burrampooter, which enters Bengal on the north-east, and joins the Ganges near the sea. I traced it in 1765, to about 400 miles above the conflux; that is, as high as the latitude of 26°, longitude 91°; where the Bengal districts end, and those of Afsam begin: but I was not permitted to go any higher. However, some few Europeans, engaged in the

Goalparah trade, and among others, M. Chevalier, the late governor of Chandernagore, by permiſsion of the king, went as high up as the capital of Aſsam, about the year 1762: but was under a considerable degree of reſtraint, with reſpect to making remarks, either on the courſe of the river, or on the country. As M. Chevalier, however, went on a very large embarkation, we are convinced that the river is navigable for large boats, through a ſpace about equal to the diſtance of Buxar from the ſea; that is, between 600 and 700 miles. It may probably be navigable much higher up; though its navigable courſe cannot be equal to that of the Ganges; this flowing chiefly through a level country, and the Burrampooter through a mountainous one.

I have placed the capital of Aſsam, Ghergong (or Kirganu), 160 G. miles nearly E by N from Goalparah, according to the report of the Aſsamers. They alſo informed me, that the Burrampooter has a very long courſe previous to its entering Aſsam; and that it comes from the N W through the Thibet mountains. Now the Lamas' map of Thibet in Du Halde, deſcribes the courſe of the Sanpoo, to within 120 G. miles of the aſsumed ſituation of the capital of Aſsam: and ſtill nearer to ſome parts of the Burrampooter, that are known, and have been deſcribed by the Aſsamers.

Theſe facts, together with thoſe reſpecting the Ava river and Nou-Kian, eſtabliſh (I think) the ſtrongeſt preſumptive proof poſsible, of the Sanpoo and Burrampooter being one and the ſame river, under different names: and poſitive proof can never be obtained, but by actually tracing them; a circumſtance unlikely ever to happen to any Europeans, or their dependants. The interval between the known part of the Sanpoo, and that of the Burrampooter, is deſcribed in the map by dotted lines. The Ayin Acbaree ſays that the Burrampooter comes from Khatai: meaning China. We muſt not forget that the ſame book ſays, that the ſource of the Ganges had never been traced, at that time.

Some difficulty ariſes in fixing the poſition of Laſsa, the capital

of Great Thibet. We have the history of the Lamas' map in Du Halde, which is not altogether favourable to its character; especially in the parts towards the source of the Sanpoo and Ganges. A close examination of its particulars, turns out still more unfavourable to it. For instance, the place where the Ganges enters the plains of Hindoostan, is placed under the 28th degree of latitude; though it is known by our late observations, to be in about 30°. With respect to the longitude, we have no grounds, on which to form an exact comparison: but we may conclude generally, that the distance between Lafsa and Hurdwar is near two degrees of longitude lefs than it ought to be: I mean, provided that Lafsa be near its true position with respect to Pekin, in the Lamas' map. The difference of longitude between them is 24° 17'; Lafsa being placed 91° 40' east from Greenwich.

With respect to Hurdwar, the proof is positive of its being two degrees farther to the south than it ought to be; and this furnishes a strong presumptive one, that all the western parts of the map, are faulty in the same proportion: and that the sources of the Ganges and Sanpoo, instead of being between the 29th and 30th degrees of latitude; are several degrees farther to the north; and probably between the 32d and 34th: of which more will be said in the sequel. Nor am I singular in this opinion; for M. D'Anville found it neceſsary to make an alteration of two degrees in latitude; and to adopt the very longitude which I have suggested. And I should be wanting in candour, and in respect to his memory, should I forbear to do justice to his nice discernment, in placing the entry of the Ganges into Hindoostan, by inference from Delhi, almost in the very spot where I have now placed it, by actual survey.

But M. D'Anville, ignorant of the respective positions of Bengal and Lafsa, adopted the latitude of the latter place, given in the Lamas' chart: that is to say, about 29° 35'. Father Giorgi (*vide Alphabetum Thibetanum*) says, the latitude of Lafsa is "about 30

" degrees and a half;" and by what follows, it can hardly be in a lower parallel.

The late Mr. George Bogle, who was sent by the Governor of Bengal (Mr. HASTINGS) on an embafsy to the Grand Lama of Thibet, in 1774, travelled by way of Coos-Beyhar, Tafsasudon, and Paridrong, to Chanmanning, the then residence of the Lama, and nearly in the same parallel of latitude with Lafsa. Unfortunately, very little geographical information was furnished by this journey; unlefs the bare account of the number of days he was on the road between the two last places, may be deemed such. However, this information, such as it is, joined with other circumstances, helps to afsure us that Lafsa is farther to the north, than the Lamas' map represents it: for Tafsasudon, the capital of Bootan, is by the accounts of the Bootanners, about 46 G. miles horizontal distance from Luckiduar, in a direction nearly north; and Luckiduar being in 26° 56', Tafsasudon cannot be in lefs than 27° 48'. Paridrong (called Paridsong in the Lamas' map) is a considerable way beyond that, and may be supposed to be in 28 degrees at least: but the Lamas' map places it in 27°; making an error of a whole degree of latitude. This place, and the chain of mountains near it, have been regarded as the common boundary between Thibet and Bengal; but Mr. Bogle has cleared up this matter, by afsuring us that Paridrong is the frontier town of Thibet towards Bootan, and not towards Bengal. And we have before ascertained that Bootan occupies an interval of at least a degree of latitude between Bengal and Thibet. Thibet and Bootan are often confounded together: the latter is a feudatory or dependency of the former, and borders on Bengal.

Thus, I flatter myself, this discufsion respecting the situation of Paridrong, joined to the information of P. Giorgi, will convince the reader, that the latitude of Lafsa, if not perfectly right in my map, is, at least, nearer the truth than it has usually been represented. Its longitude is taken from the Lamas' map, in which it is reckoned

24° 17′ west from Pekin, or 91° 40′ east from London. Had the bearings and latitudes of Mr. Bogle's route been taken, we should not only have been able to determine the position of Lafsa, with some degree of accuracy (as the direction of the road is so much to the north), but also most of the intermediate places. Mr. Bogle was sixteen days on the road from Paridrong to Chanmanning. The distance afsigned between these places in the Lamas' map, is about 167 G. miles of horizontal distance: it is about ten more on the map.

The southernmost ridge of the Bootan mountains, rises near a mile and half perpendicular, above the plains of Bengal, in a horizontal distance of only 15 miles; and from the summit, the astonished traveller looks back on the plains, as on an extensive ocean beneath him. There are not many pafses through this ridge, and all are fortified. The fort of Dellamcotta, which commands the principal pafs, was taken by storm in 1773, by a detachment under the command of Capt. John Jones; and the fame of this exploit made the Thibetians sue for peace; and was the immediate occasion of Mr. Bogle's embafsy. The road between Bengal and Tafsasudon, lies chiefly over the summits of stupendous mountains, or along the borders of craggy precipices; so that the direct distance is not easily ascertained, even by the most intelligent traveller.

Between Tafsasudon and Paridrong, is a chain of mountains still higher than the other. They are visible from the plains of Bengal, at the distance of 150 miles, and are commonly covered with snow. These are a continuation of the mountains *Emodus* and *Paropamisus* of the ancients; and are sometimes by the moderns erroneously called *Caucasus*. In the Lamas' map, they are called Rimola: and by the people of Hindoostan *Himmaleh* (see page 126). I take it for granted that Himola or Himmaleh ought to be substituted for Rimola, in Du Halde's map. I suppose them to be in point of elevation equal to any of the mountains of the old hemisphere. Indeed, the country of Thibet is, altogether, one of the highest in

Asia; it being a part of that elevated tract which gives rise not only to the rivers of India and China, but to those also of Siberia and Tartary: for if we examine the map of Asia, we shall find that most of those capital rivers rise between the 31st and 47th degrees of latitude, and between the 70th and 97th degrees of longitude; from whence they run in every direction to the sea, as the Rhine, Rhone, Danube, and Po, do from the Alpine tract in Europe.

Father Giorgi, whom I have mentioned before, has given us, in his *Alphabetum Thibetanum*, an itinerary between Calcutta and Lafsa. The distances he estimates in miles, which he probably meant for Italian, although they agree nearly with English ones. For he reckons 284 between Cofsimbuzar and Patna, which is the exact number of measured statute miles between the two places. And between Singhya and Maifsy, he reckoned 40, for 37 measured ones. We may therefore conclude that he was equally fortunate in proportioning the rest of his distances; although the roughnefs of the road will not always admit of forming any just proportion between the distance by the road, and the horizontal distance. We are almost entirely in the dark as to the particular direction of his course.

Catmandu, the capital of Napaul, is placed according to the authority of some MS. maps made by some mifsionaries who travelled from Bettyah to that place: and I found no material disagreement between their accounts and Giorgi's. I have therefore placed Catmandu 10.5 G. miles nearly north from Maifsy, that is, in latitude 28° 6′.

From Catmandu to Lafsa, Giorgi reckons 504 miles by the road; but it must be observed that he omits to mention the distances of two stages between Khansa and Mescinzungh: and as the preceding ones were of 14 and 16 miles, and the two succeeding ones 16 each, I may venture to add 32 miles for the two omifsions; and then the whole distance will be 536 B. miles, or 462 G. ones.

The horizontal distance between Catmandu and Lafsa (the latter being placed as described in page 301), is 346 G. miles: so that according to Giorgi's distance, one mile in five, will be taken up by the windings of the road: and this is not improbable, considering the mountainous nature of the country; for in the flat countries of Hindoostan, the proportion is sometimes 1 in 7.

The territories of Napaul extend to the mountains of Rimola, as they are called in the Lamas' map. Giorgi does not give the modern name of them; but justly concludes that the ancient one was Emodus. These are a continuation of the chain between Tafsasudon and Paridrong. Between Catmandu and these mountains, he paſsed by a famous place of worship, called by him *Nogliocot*, but by the Bengalese, Nagorkote; which gives name to a paſs that leads to it, through the Bootan mountains, on the north of Purneah. (There is also a famous place of worship of nearly the same name in the mountains of Lahore). He also croſsed the upper part of the *Koſs*, or Cosa river, which takes its course through Purneah, to the Ganges.

Tankia, or Tinkia-ling, is a fortreſs and town situated at the hither foot of mount Langur, a second ridge of stupendous mountains, situated about 50 miles beyond mount Rimola; and said to abound with suffocating exhalations, which increase as you ascend; but are weakest when the mountains are covered with snow. Tankia is the first place in Giorgi's itinerary, that can be recognized in the Lamas' map: for Nialma on the Nitchou river (probably the *Nobotba* of Giorgi) does not agree with any of Giorgi's names, although its situation does with Catmandu; which, however, the Thibetians call Jangbu.

About 25 miles beyond mount Langur, is the beautiful valley of Tingri, said to be 50 miles in length, though but narrow. It is described by Giorgi as an earthly paradise, in every respect save the sharpneſs of the air.

The next place of note is Zuenga, or Tzuenga, a castle or fortrefs on the river Bontsu (supposed by Giorgi to be the *Bantiso* of Ptolemy), and about 90 B. miles from Tankia. From hence two roads lead to Lafsa: the northernmost by Sgigatche (or Jiecsee, as it is called in the Lamas' map) and Rimbu; the other, and which was travelled by Giorgi, is by Kiangsee, or Tchiantse. He speaks of wild horses variously spotted, in great numbers on the banks of the Bontsu. These, I presume, are of the kind that are annually brought for sale into Hindoostan, where they are known by the name of *Tanyans*: and are of a hardy breed.

Kiangse is represented as a fine city and fortrefs; with a convent near it, which is so very extensive and magnificent, that it has the appearance of another city.

About 50 miles beyond Kiangse, and three days journey short of Lafsa, is the famous lake Palte, called by the natives Jamdro, or Jangso. It is of so great extent, that according to the report of the natives, it requires eighteen days to walk round it. In the Lamas' map, however, the circumference is only 150 British miles. In the middle of it, there are, according to Giorgi, a continued range of hillocks and islands; or, according to the Lamas' map, one large island, incircled by a lake from three to eight miles wide. On the western shore of this island, or congeries of islands, is a monastery, and the seat of the *Lamifsa* Turcepamo*, or *The Great Regenerate*: in whom the Thibetians think that a divine spirit is regenerated, as in the Great Lama. The road from Kiangse to Lafsa lies along the north side of this lake, a day and half's journey.

Between the lake and the river Sanpoo, which is about 12 miles, another very high ridge of mountains crofses the road. This ridge is named Kambala, and from the top of it may be seen, towards the north, a range of still higher mountains, covered with snow.

* Lama fignifies a prieft, or minister of religion; and Lamifsa is the feminine of Lama.

The river Sanpoo,* or, according to Giorgi, *Tzangciu*, or *Tzanga*, is seven miles from the foot of mount Kambala; and is crofsed in the way to Lafsa, about 12 miles farther on, either over a bridge, or in a boat. The bridge, as well as most others in this country, is composed of iron chains stretched from side to side, with planks or logs laid acrofs them.

Giorgi says that the chains are composed of 500 links, each a foot long.† We may conclude that the bridge is laid over the narrowest part they could find, which, by this account, is 160 English yards in breadth; otherwise we might expect a larger body of water in a river that had ran at least seven or eight hundred miles; and had received into its bed so great a number of streams. I compute that at this crofsing-place, the Sanpoo (which is afterwards called the Burrampooter) has as far to run to meet the sea, as the Ganges has at its first entry on the plains of Hindoostan; that is, about 1350 B. miles.

The city of Lafsa is, by the road, about 24 miles to the north-eastward of the crofsing-place of the Sanpoo; and is situated in a spacious plain. It is not considered as a large city; but the houses are of stone, and are spacious and lofty. The mountain of Putala, which contains on its summit the palace of the Grand Lama, the high-priest and sovereign of Thibet, is about seven miles on the east of the city.

Much confusion arises from the application of so many different names to this capital of Thibet. Giorgi tells us, that the proper name of it, in the language of Thibet, is Baronthala; but that the Tartars call it Lafsa, or Lahafsa. Other accounts call it Tonker; and apply the names Lafsa and Baronthala to the district which contains Tonker and Putala. And again others give the name of Putala, instead of Lafsa, to the capital of Thibet. But we ought to apply the name Lafsa, or Lahafsa, to the capital; and to consider

* Sanpoo, in the language of Thibet, means *The River*.
† I take it for granted that he means Italian feet.

Putala as the castle and palace of the Lama, and his ordinary place of residence.

By Thibet, or more properly Great Thibet, we are to understand all that vast country extending from the sources of the Indus to the borders of China: and from Hindoostan, to the great desert of Cobi, northward; though we have but a faint idea of its extent towards that quarter. Its length from east to west cannot be less than 1600 British miles: its breadth is very unequal. We are informed generally that it is divided into three parts; that is, Upper, Middle, and Lower Thibet. The upper division seems to respect the countries towards the sources of the Ganges and Sanpoo rivers: the middle, that in which Lasa is situated, and of which it forms the centre: and the Lower Thibet, that which borders on China. But the subject is obscure, and likely to remain so. Little Thibet, which is situated between Upper Thibet and Cashgur, is rather a dependency of the latter, than of Great Thibet.

Considering the exceeding rough and sterile state of the country of Thibet, and the severity of its climate, from its wonderful elevation, we are astonished to find its inhabitants in a high state of civilization; their houses lofty, and built of stone; and the useful manufactures in some degree of improvement. All these advantages they probably owe to their vicinity to the Chinese; to whom, indeed, the Lama is tributary. For an account of Thibet, see Astley's Collection, Vol. IV. Phil. Trans. Vol. LXVIII. *Lettres Edifiantes*, Vol. XV. and the *Alphabetum Tibetanum*.

With respect to the heads of the Ganges and Sanpoo rivers, although they were visited by the Lamas or priests, sent by the Emperor CAMHI, whose laudable curiosity led him to add these particulars to the geography of Thibet; yet we are far from being well informed, concerning the true positions of these celebrated fountains. A late publication by M. Bernoulli (who has done me too much honour in the course of it), contains, among a variety of other matter, a map of the courses of the Ganges and Gogra rivers;

drawn by M. Anquetil du Perron, from the materials of the late P. Tiefentaller. This map is highly interesting, on the score of itscontaining the course of the Ganges, as high up as the *Gangoutra*, or cavern, styled by the Hindoos, the cow's mouth; and which is near 300 miles above the place where the Ganges enters Hindoostan: as well as the course of the Gogra river, to its source, in the western part of Thibet. Unfortunately, no observations appear to have been made for the purpose of determining the latitudes of either of these places: which, on a course approaching to meridional, would have furnished a rule for correcting the distances: those remaining quite problematical, from the circumstance of the route's being very crooked, and paſsing through a very mountainous country; to which the scale of computed coſses cannot be applied, with any degree of certainty. What is yet more against the latter part of the performance (the Gogra river) is, that P. Tiefentaller did not visit the source of it, himself, as he did the Gangoutra; but stopt short at a place not far within the Kemaoon mountains, and took the account of the upper part of its course, from a *native* (of Hindoostan we may presume). The names of places, and remarks, are written in the Persic character, and translated (it appears) by M. Anquetil du Perron.

But notwithstanding any imperfections that may be imputed to the materials, or want of judgment in determining the scale, this map conveys much intelligence respecting the heads of the Ganges and Burrampooter rivers, as well as that of the Gogra; if we employ the lights furnished by Du Halde, in his map of the heads of the Ganges and Sanpoo, to illustrate the subject before us. Let us proceed to the examination of it, without any regard to nicety of scale.

The Gogra or Soorjew river, then, is traced into a lake named *Lanke-Dbe*; which has immediately on the east of it, but without communicating with it, a much larger lake, named *Mansaroar*; out of which proceed two rivers, the one to the west, or N W,

the other to the east, or S E. Both of these lakes are said to be situated within Thibet; as indeed some of the villages on the bank of the Gogra, much farther to the southward, are. By the construction of M. Anquetil's map, the site of these lakes is carried as high up as the latitude of 36°: however, by an analysis of the scale, they can hardly be higher than $33\frac{1}{4}°$; as will be presently shewn. Now, in the Lamas' map of Thibet, the heads of the Ganges and Sanpoo rivers (which last, is called the Burrampooter, in the lower part of its course) are separated only by a ridge of mountains, named Kentaisse. The head of the Ganges is composed of two streams, which run westward; and the southmost of these branches runs through two lakes, of which the first is named *Mapana*, and the second *Lanken*. These lakes are placed in respect of each other, as Tiefentaller's are; and the names of the corresponding ones, are Lanke in one, and Lanken in the other account: and *Mansaroar*, and *Mapana*. The names of the latter have certainly no affinity with each other; but the similitude in point of situation, remains. The river that runs from the Lanken lake in Du Halde, is named Lank-tshou: and that from the Lanke lake of Tiefentaller, is the Gogra. With regard to the two rivers that issue from the Mansaroar lake of Tiefentaller, that which runs to the west is said to be the Satloudj (Setlege), a river that has been noticed in page 102, as the easternmost of the five Panjab rivers. This particular, however, the author himself discredits, and very justly: and the reader by turning to the map of the heads of the Indus, &c. at page 200, may satisfy himself as to the probability of it. In my opinion, this is the southernmost of the two heads of the Ganges, above noticed; and which is known to run by Dsaprong (or Chaparang), a considerable city not a very great way to the westward of these lakes (vide Lama's map in Du Halde, or D'Anville's map of Asia). If it be objected that the Ganges is too famous a river to escape the notice of the people who knew the Burrampooter, at its source; I answer, that I do by no means believe that the people

in Thibet know the Burrampooter, by any other name than that of Sanpoo; and that the word Burrampooter is an interpolation. Indeed the writing in the map, imports only, "it is said that the "Burrampooter, &c." and the translation of the Persic writing, at the efflux of this eastern river, gives a very different idea; being "*Grand riviere qui va du côte de Neipal*" (or Napaul). It is clear, however, that the people have an idea, that the western river has a very long course. I scruple not to believe, that the Lanke lake of Tiefentaller, is the Lanken of Du Halde; and that the Mansaroar of one, is also the Mapana of the other: and that the circumstances relating to the effluxes of the rivers, which appear to contradict each other, have not been carefully examined into, either by the one, or the other party. As the Mansaroar lake is said to be 60 *milles Indiens* (which ought to mean cofses) in circumference, that is, 115 B. miles; we can hardly suppose that the native who furnished the account, made the tour of it, either to measure its extent, or to explore the heads of the rives: and on the other hand, the Lamas sent by CAMHI, might take a great deal of their account on trust. Therefore without contending about the exact circumstances of the case, I have described the Ganges (that is, the southern branch of it) as ifsuing out of the lake Mansaroar: but have not regarded the eastern river as the Burrampooter, or Sanpoo; because it would be doing too much violence to the account given by the Lamas; which describes the Sanpoo as ifsuing from the eastern side of mount Kentaifse, and at least 40 miles from these lakes. Besides, the Lamas give an account of a third lake, named Conghé, which intervenes between the Mansaroar lake, and the head of the Sanpoo. If I am mistaken in my conjectures, I cannot mislead others, while the map is accompanied with this discussion. The Lamas' map which appears in Du Halde, places the head of the Ganges in latitude 29 $\frac{1}{2}$°; and M. D'Anville found it neceſsary to remove it almost as high as 32°. In the present map, it stands in 33 $\frac{1}{4}$°: all which may serve to show how vague a per-

formance the Lamas' map is, which errs $3\frac{1}{2}°$ in latitude. It also placed Lafsa, which ought to be a well known position to them, a full degree too far to the south.

In the construction of the map of the Gogra, 32 cofses are reckoned to a degree, in a country, the most rugged and mountainous, imaginable; while 42 is the standard in the level country. A distinction, however, must be made in the scale of the upper and lower parts of the course of the river. For, from Mirzapour, which occurs in my map of Oude, to the lake Douloo-Sagur, the country is generally level: and was also explored by Tiefentaller himself; while the upper part is taken from the reports of a native. Therefore I have allowed 43 cofses to a degree, between those two points; so that the distance will be 98 G. miles, instead of the 131 in the map. Then for the upper part of the river, I have allowed 60 cofses to make a degree, instead of 32: by which the distance from the lake Douloo-Sagur, to the lake Lanke, is only 230 G. miles, instead of the 373 on the map. To those who may object to so great a diminution, as from 60 to 32; I shall observe, that 32, or even $37\frac{1}{2}$ cofses to a degree, is a proportion widely different from that which my experience suggests: and which allows 42 in the level country of Hindoostan proper (see page 5): and whosoever has travelled in very mountainous countries, and has moreover traced the course of a river through it; will not object to the diminishing to 1, what was 1,43 in the plains: for this is the proportion between 60 and 42.

If Tiefentaller's scale is right, the Lanke lake would be in latitude 36° and upwards; which I consider as highly improbable. It is certain that our best maps of Asia (that is, D'Anville's), present nothing but a blank space, in the part afsigned to the heads of these rivers, by M. Anquetil du Perron: and therefore, there is no positive evidence against it.

In ascending this river Gogra, we find noted in the map, not far within the first ridge of mountains, and near the second ridge,

three subterraneous caverns, from whence proceed with violence, fire, wind, and water. No other particulars are given. About 80 miles higher up, the Gogra forces its way through that vast ridge which has been often taken notice of before, under the name of Himmaleh, and which is a branch of the Emodus, or Imaus, of the ancients. This ridge, which is covered with snow, and visible from the plains of Hindoostan, appears to be the general boundary of Thibet, through that whole extent from the Ganges to the Teesta river; inclosing between it and Hindoostan, a tract of country, from 100 to 180 miles in breadth; divided into a number of small states, none of which are understood to be either tributaries or feudatories of Thibet: such as Sirinagur, Almora, Kemaoon, Gorka, Napaul, and Morung. Bootan, a feudatory of Thibet, closes on the east of this tract; and is the extent of our knowledge, as to particulars, that way.

The small number of towns and villages on the banks of this river, induces one to suppose that the western part of Thibet, is no better inhabited than we have before described the eastern part of it to be. Indian names prevail, even within Thibet: and a temple of Mahadeo is found on the banks of the Manſaroar lake.

We have before stated the distance of the cow's mouth, or Gangoutra, to be about 280 or 300 road miles, above Hurdwar; where the Ganges enters the plains of Hindoostan. As the compaſs of Tiefentaller's map of the Ganges, declines 12 degrees more to the westward of north, than that of the survey does, between Allahabad and Hurdwar; this allowance is made accordingly: and Tiefentaller's distance exceeds that of the survey, within the same space, which is 331 G. miles, about $\frac{1}{11}$ of the whole. Not being absolutely certain whether or not Tiefentaller took the latitude of Gangoutra, I did not venture to alter the parallel in which he has placed it, 33°: but contented myself with correcting the bearing 12 degrees; thereby shortening the distance, which was originally 240 miles, to 227. If the latitude was not taken, by celestial

observation, but the distance calculated on the scale of 37½ coſses to a degree, the Gangoutra will still be placed too far to the north.

To sum up the whole information, collected from the different accounts of the upper part of the course of the Ganges, it appears that the two branches of it, which spring from the western side of mount Kentaiſse, take their course westward, inclining considerably to the north, for a course of about 300 miles, in direct distance; when meeting the great chain or ridge of mount Himmaleh, which extends from Cabul along the north of Hindoostan, and through Thibet, the rivers are compelled to turn to the south; in which course they unite their waters, and form what is properly termed the river Ganges. This great body of water now forces a paſsage *through* the ridge of mount Himmaleh, at the distance, poſsibly, of 100 miles below the place of its first approach to it, and sapping its very foundations, rushes through a cavern, and precipitates itself into a vast bason which it has worn in the rock, at the hither foot of the mountains. The Ganges thus appears, to incurious spectators, to derive its original springs from this chain of mountains: and the mind of superstition has given to the mouth of the cavern, the form of the head of a cow; an animal held by the Hindoos, in a degree of veneration, almost equal to that, in which the Egyptians of old, held their god Apis.

From this second source (as it may be termed) of the Ganges, its course becomes more eastwardly than before, through the rugged country of Sirinagur; until, at Hurdwar, it finally escapes from the mountainous tract, in which it has wandered for about 800 B. miles. At Hurdwar, it opens itself a paſsage through mount Sewalick; which is the chain of mountains that borders on the level country, on the north of the province of Delhi. Even Sewalick would be deemed a lofty ridge, but for the presence of mount Himmaleh, or *Imaus*; which rises above it, when viewed from the plains of Hindoostan.

It may truly be said that the knowledge of the origin of the Ganges was reserved for the present age: for it was so late as the year 1717, that the Emperor CAMHI, sent persons to explore it; and to bring some of its water back with them to Pekin; a journey of about 2500 B. miles from the head of the Ganges. Until the result of this expedition was known in Europe, it was believed, on the faith of the Hindoos, that the springs of the Ganges, were at the foot of mount Himmaleh.

A circumstance attending the courses of the Ganges and Burrampooter rivers, in respect to each other, is remarkably singular. Iſsuing from opposite sides of the same ridge of mountains, they direct their courses towards opposite quarters, till they are more than 1200 miles asunder; and afterwards meet in one point near the sea, after each has performed a winding course of more than 2000 miles. Our ignorance of this circumstance, till so very lately, is a strong presumptive proof, that there yet remains a vast field for improvement, in the geography of the eastern part of Asia.

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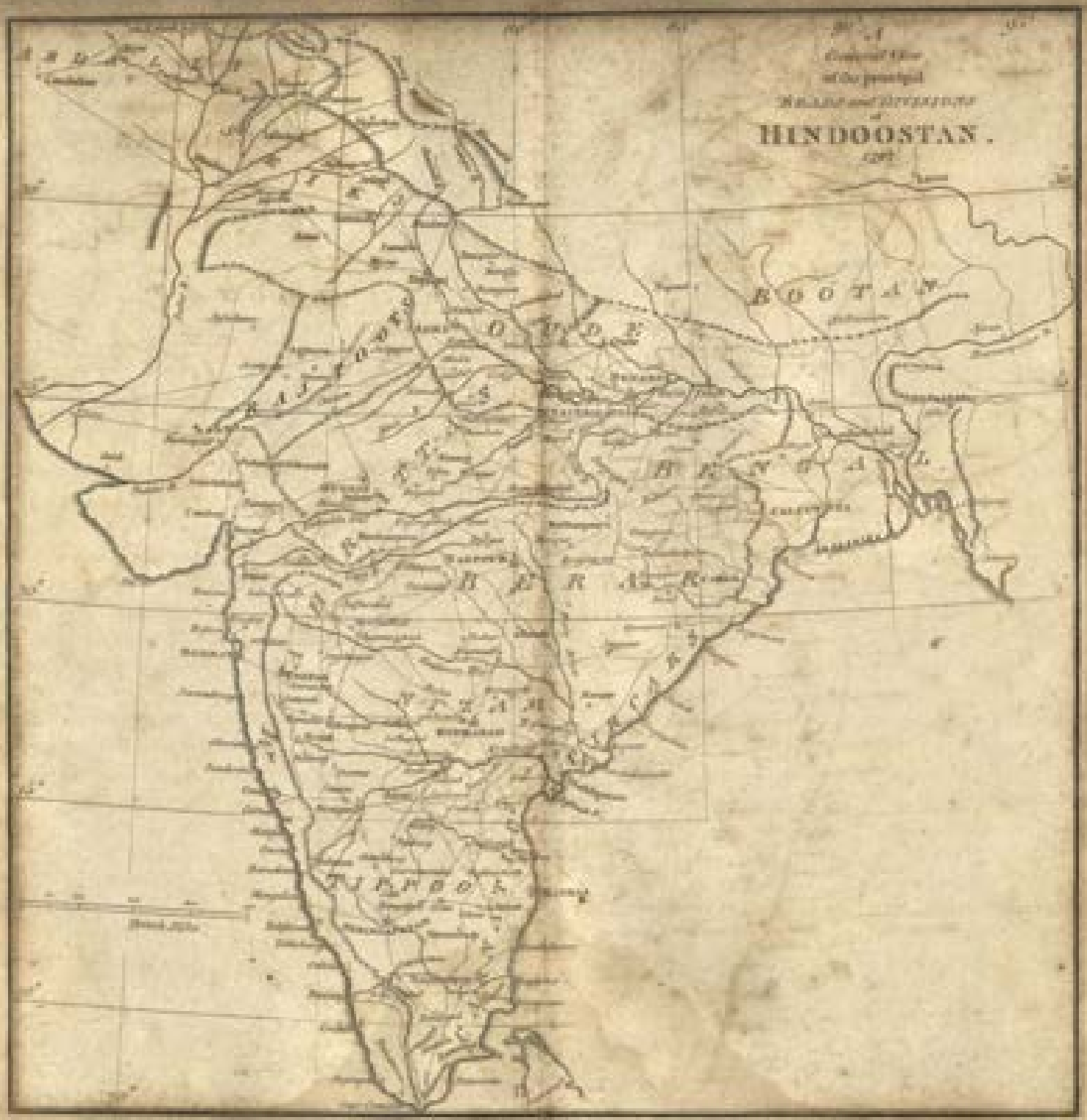
HINDOOSTAN.
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SECTION VII.

TABLES *of* DISTANCES *in* HINDOOSTAN.

THE following tables, will, it is hoped, be particularly acceptable, not only to those, who for useful purposes may be desirous of calculating the time required for a courier or meſsenger to travel from one place to another, but also to those, who on the score of curiosity, or for the illustration of history, may wish to be informed of the distances between the principal towns in Hindoostan. This information cannot be obtained merely by the application of the compaſses to the map, because the windings and inflections of the roads, are not there taken into the account: but an approximation towards it, may be obtained, by the double operation of measuring the distance on the map, and then applying to it, the rule given in page 7 of this Memoir.

To accomplish the task above proposed, I first selected the names of such cities and other places, as appeared likely to become objects of inquiry, in future; and in so extensive a country, no leſs than 168 such places occurred. To have given the distance between every two of these places respectively, would not only have extended the tables to an immoderate length (upwards of 14,000 distances occurring on the above number), but would have burdened the purchaser with much uselesſs matter. For instance, although Jionpour has a political connection with Lucknow, and Tanjore with Madras; and it may be neceſsary that the distance of each of these subordinate places from its superior, should be given:

yet, as Jionpour and Tanjore stand in little or no relation to each other, it was of no use to give the distance between them. The same may be said of most of the other subordinate places.

The method, therefore, that I have followed, is this: I have chosen such places as appear to be of the greatest political consequence (such as the British Presidencies, and the courts of the native princes), and of which I reckon 12; and considering them as centres, have formed for each, a separate table, in which the distance from the central place to every other place of note, whose situation may be supposed to become a matter of inquiry, is inserted; the names following in alphabetical order. A page is allotted to each of these central places, which are AGRA, BENARES, BOMBAY, CALCUTTA, DELHI, HYDRABAD, LUCKNOW, MADRAS, NAGPOUR, OUGEIN, POONAH, and SERINGAPATAM, and these also follow in the same order.

The tables contain near 1000 distances; and although these are reckoned only from 12 different points, yet by attending to the particulars of each table, a great many other distances may be found; as the communication between places, is usually by the medium of the capital towns that intervene (see page 6). For instance, the distance between Arcot and Allahabad may be collected from the tables of Hydrabad and Nagpour, as these places lie in the line of direction between the two former. Also, the distance between Patna and Aurungabad may be found by means of the Nagpour table: and that from Mirzapour to Surat, by subtracting the distance of the one from the other, in the Benares table. And by the same methods, the distances between most other places of note may be found. And in order to facilitate the search, and bring into one view, the respective positions of the several places mentioned in the tables, I have added a small map.

To avoid repeating the distances between the 12 central or primary places, through every table, they are inserted in that table, alone, whose name stands first in the alphabet. Thus the distance

between CALCUTTA and AGRA, will be found in the AGRA table, and not in that of Calcutta.

With respect to the distances themselves, it must not be expected that they are in general critically exact; for although the positions of eight out of the twelve primary places, are determined with some degree of precision; and three out of the four remaining ones, pretty nearly; yet the intermediate roads have, in few instances (those between Bengal and Delhi excepted) been measured. But since the publication of the first tables, the measured routes of Col. Pearse from Calcutta to Madras, Mr. Ewart's between Calcutta and Nagpour; and Mr. Pringle's tables of routes in the Carnatic; have come to hand: and the present tables will accordingly be found much improved. The deficiencies could only be supplied by the computed distances; which, however, appear to come as near the truth in India, as in any country whatever: or, where these have failed, by allowing such a degree of winding, as is found by experience to take place in a similar kind of country. The cofs is always reckoned at one British mile and nine-tenths, in road measure. For other particulars respecting the length of the cofs, and the windings of roads, the reader is desired to turn to the first pages of this Memoir.

The length of a day's journey in Hindoostan (as has been observed before) is from 11 to 12 cofses, or about 22 miles, for an ordinary traveller. But that of a courier, or profefsed meſsenger, may be reckoned at 30 or 33; and on occasions of emergency, they can travel even more; and that for a continuance of 15 or 20 days.

A regular post is established throughout the parts of Hindoostan subject to the East-India Company, and also from Calcutta to Madras. The postmen always travel on foot. Their stages are commonly from seven to eight miles; and their rate of travelling within our own districts, about 70 miles in the 24 hours.

TABLE I.

AGRA, *to*

	British Miles.
Agimere	230
Allahabad	296
Amedabad	534
Amednagur	713
Arcot	1160
Attock	755
Aurungabad	633
Bareilly	129
Beder	740
Benares	379
Bisnagur	989
Bombay *by Burhanpour*	848
by Amedabad	858
Burhanpour	508
Cabul	976
Calberga	865
Calcutta *by Moorshedabad*	944
by Birboom	839
Calpy	160
Cambay	587
Candahar *by Cabul*	1208
Canoge	127
Cashmere	724
Cattack	785
Chatterpour	212
Cheitore	300
Corah	184
Dacca	990
Delhi	137
Dowlatabad	628
Ellichpour	487
Etayah	71
Fyzabad. *See Oude.*	
Goa	1020
Golconda	790
Gwalior	80
Hurdwar	217
Hydrabad *by Elichpour*	806
by Nagpour	835
Jagarnaut	793
Joinagur *or Jaepour*	136
Lahore	517
Lucknow	202
Madras *by Elichpour*	1158
by Nagpour	1187
Masulipatam	831
Meerta	294
Mirzapour	346
Moorshedabad	826
Moultan *by Delhi*	631
Mundu	420
Mysore	1238
Nagpour *by Hufsingabad*	548
by Chatterpour	514
Napaul	424
Narwah	127
Oude *or Fyzabad*	287
Ougein *by Narwah*	374
Patna	544
Pondicherry	1287
Poonah	796
Ramgaut	74
Rantampour	120
Ruttunpour	513
Sattarah	840
Seringapatam	1230
Sirong	253
Sumbulpour	617
Surat *by Amedabad*	680
Tatta *or Sindy*	887
Visiapour	825
Warangole	868

TABLE II.—BENARES *to*

	British Miles.
Agimere	571
Allahabad	83
Amedabad	793
Arcot	1105
Attock	1134
Aurungabad	740
Balasore *by Cbuta Nagpour*	316
Bareilly	345
Baroach	820
Beder	726
Bidjigur	56
Bilsah	416
Bombay *by Nagpour*	982
by Burhanpour	950
Bopaltol	449
Burhanpour *by Sagur*	609
Buxar	70
Cabul	1355
Calberga *or Kilberga*	783
Calcutta *by Moorsbedabad*	565
by Birboom	460
Calpy	239
Cambay	806
Candahar	1588
Canoge	259
Cashmere	1104
Cattack *by Cbuta Nagpour*	452
Chatterpour	237
Cheitore	601
Chittigong	752
Chunargur	17
Corah	195
Dacca	601
Delhi	516
Dowlatabad	742
Ellichpour	552
Etayah	308
Furruckabad	295
Fyzabad. *See Oude.*	
Ganjam	570
Ghod *or Gobud*	336
Goa	1070
Golconda	750
Gurrah	270
Gwalior	355
Hurdwar	500
Hydrabad	751
Jagarnaut	512
Jionpour	42
Indore	584
Joinagur *or Jaepour*	515
Lahore	897
Lucknow	189
Madras *by Hydrabad*	1103
Masulipatam *by Nagpour*	853
Meerta	636
Mindygaut	253
Mirzapour	30
Monghir	255
Moorshedabad *by Birboom*	417
by Monghir	477
Moultan	1010
Mundlah	306
Mysore	1165
Nagpour	430
Napaul	280
Narwah	356
Oude	130
Ougein	554
Patna *by Buxar*	155
by Daoadnagur	165
Pawangur	754
Pondicherry	1203
Poonah *by Nagpour*	916
by Burhanpour	897
Ramgaut	419
Rewah	126
Rotasgur	81
Ruttunpour	275
Sagur	341
Sattarah	942
Seringapatam	1157
Sindy *or Tatta*	1210
Sirong	389
Sumbulpour	375
Surat *by Sirong and Ougein*	863
by Burhanpour	869
Tanjore *by Nagpour*	1273
Tritchinopoly	1277
Vizagapatam	758
Visiapour	876

TABLE III.—BOMBAY *to*

	British Miles.
Agimere *by Amedabad*	650
Allahabad *by Nagpour*	977
Amedabad	321
Amednagur *by Poonah*	181
Anjenga	900
Arcot	722
Aurungabad *by Callian*	260
by Poonah	284
Baroach	221
Bassein	27
Beder	426
Bednore	452
Bisnagur	398
Bopaltol	516
Burhanpour *by Poonah*	386
by Chandor	340
Calberga	386
Calcutta *by Poonah*	1301
Callian	32
Calpy	821
Cambay	281
Canoge	889
Cashmere	1277
Cattack	1034
Chatterpour	747
Cheitore	547
Cochin	780
Corah	853
Damaun	107
Delhi *by Amedabad and Agimere*	880
by Burhanpour	965
Dowlatabad	258
Fyzabad. *See Oude.*	
Goa	292
Golconda	475
Gwalior	768
Hulsingabad Gaut	500
Hydrabad	480
Jagarnaut	1052
Jansi	728
Jeselmere	680
Indore *by Pawangur*	456
Joinagur *or Jaepour*	740
Lahore	1070
Lucknow	923
Madras	758
Mangalore	518
Masulipatam	686
Meerta	610
Mirzapour	952
Moorshedabad	1259
Moultan *by Jeselmere*	950
Mundu	454
Mysore	630
Nagpour *by Poonah*	577
by Callian	552
Narwah	721
Onore	398
Oude *by Burhanpour and Sirong*	1013
Ougein *by Pawangur*	480
by Burhanpour	500
Patna *by Rewah*	1145
Pawangur	286
Pondicherry	805
Poonah	98
Ruttunpour	772
Saler-Mouler	182
Sattarah	146
Seringapatam	622
Sindy *or Tatta*	741
Sirong	595
Sumbulpour	826
Surat	177
Tellicherry	615
Visiapour	234
Vizrabuy *or Vizurabie*	48

TABLE IV.—CALCUTTA *to*

	British Miles.
Adoni	1030
Agimere *by Moorshedabad*	1136
by Birboom	1030
Allahabad *by M.*	649
by B.	544
Amedabad *by Ougein*	1234
Amednagur	1119
Anjenga	1577
Aracan	475
Arcot	1070
Afsam, *Capital of*	660
Attock	1700
Ava	1150
Aurungabad	1022
Bahar	297
Balasore	141
Baroach *by Nagpour*	1220
Bareilly *by M.*	910
by B.	805
Bafseen *by Poonah*	1317
Bedcr	980
Bednore	1290
Bilsah *by Mundlah*	867
Bisnagur	1120
Bopaltol *by Mirzapour*	929
by Mundlah	892
Burhanpour *by Nagpour*	978
Buxar *by M.*	485
by B.	408
Cabul *by M.*	1920
by B.	1815
Calberga *by the Circars*	1018
Calpy *by M.*	804
by B.	699
Cambay *by Nagpour*	1273
by Mundlah and Ougein	1253
Candahar *by Moorshedabad*	2152
by Birboom	2047

	British Miles.
Canoge *by M.*	844
by B.	719
Cashmere, *Capital of, by M.*	1608
by B.	1504
Cattack	291
Chatterpour *by M.*	813
by B.	698
Cheitore *by M.*	1168
by B.	1063
Chittigong	317
Chunargur *by M.*	574
by B.	479
Cicacole	490
Comorin Cape	1470
Condavir *or Guntoor*	791
Corah *by M.*	760
by B.	655
Dacca	177
Delhi *by M.*	1081
by B.	976
Dellamcotta	341
Dowlatabad	1020
Ellichpour	844
Ellore	719
Etayah *by M.*	873
by B.	768
Furruckabad *by M.*	860
by B.	755
Ganjam	369
Gangpour	393
Ghod *or Gobud by M.*	888
by B.	783
Goa	1300
Golconda	907
Guntoor. *See Condavir.*	
Gwalior *by M.*	910
by B.	805

CALCUTTA *to*

	British Miles.
Hurdwar *by M.*	1080
by B.	975
Hufsingabad Gaut *by Nagpour*	909
Hydrabad *by Nagpour*	1043
by the Circars	902
Jagarnaut	311
Indore *by Mundlah*	1030
Joinagur *or Jaepour by M.*	1080
by B.	975
Lahore *by M.*	1461
by B.	1356
Lafsa	850
Lucknow *by M.*	754
by B.	649
Madras	1030
Madura	1336
Masulipatam	764
Meerta *by M.*	1197
by B.	1092
Mindygaut *by M.*	818
by B.	713
Mirzapour *by M.*	598
by B.	493
Monghir *by M.*	301
by B.	275
Moorshedabad	118
Moultan *by M.*	1585
by B.	1470
Mundilla	634
Mysore	1178
Nagpour, *Great*	
by Ruttunpour	722
by Cattack	733
Nagpour, *Little*	280
Napaul	591
Narwah *by M.*	922
by B.	817

	British Miles.
Ongole	829
Oude *by Moorshedabad and Benares*	695
by Birboom and Benares	590
by Moorshedabad and Azimgur	639
by Birboom and Azimgur	562
Ougein *by Patna*	1066
by Nagpour	1062
by Mundlah	997
Patna *by M.*	400
by B.	340
Pawangur *by Ougein*	1197
Pondicherry	1130
Poonah *by Nagpour*	1208
by the Circars	1289
Ramgaut *by M.*	984
by B.	879
Rajamundry	665
Ruttunpour *by Little Nagpour*	493
by Cattack	545
Sagur *by Mundlah*	806
Sattarah *by Nagpour*	1232
Seringapatam	1170
Silhet	325
Sindy *or Tatta*	1602
Sirong *by Benares*	849
Sumbulpour *by Cattack*	441
by Little Nagpour	438
Surat *by Benares and Ougein*	1309
by Nagpour	1238
Tanjore	1235
Tritchinopoly	1238
Visagapatam	557
Visiapour *by the Circars*	1183
by Aurungabad	1216

TABLE V.—DELHI *to*

	British Miles.
Agimere	230
Allahabad	412
Amedabad	610
Amednagur	830
Aracan	1420
Arcot	1277
Afsam	1318
Attock	618
Aurungabad	750
Bahar	642
Bareilly	142
Beder	857
Bisnagur	1106
Burhanpour	625
Cabul *by Rotas*	839
Calberga	982
Calpy	277
Cambay	663
Candahar *by Cabul*	1071
Canoge	214
Cashmere *by Lahore*	587
Cattack	902
Cheitore	327
Comorin Cape	1728
Corah	301
Dacca	1107
Dowlatabad	745
Ellichpour	604
Etayah	188
Fyzabad. *See Oude.*	
Ghizni *by Cabul*	917
Goa	1158
Golconda	958
Gwalior	197
Hurdwar	117
Hufsun-Abdaul	584
Hydrabad *by Ellichpour*	923
by Nagpour	952

	British Miles.
Jagarnaut	910
Jionpour	456
Joinagur *or Jaepour*	156
Jummoo	428
Lahore	380
Lucknow	279
Madras *by Ellichpour*	1295
by Nagpour	1324
by Burhanpour	1377
Masulipatam	1084
Meerta	295
Mindygaut	220
Mirzapour	463
Moorshedabad	943
Moultan	494
Mysore	1330
Mundu	481
Nagpour	631
Napaul	500
Narwah	244
Oude	370
Ougein	440
Paishawur	663
Panniput	72
Patna	661
Pondicherry	1400
Poonah	913
Ramgaut	77
Ruttunpour	633
Sattarah	975
Seringapatam	1321
Sindy *or Tatta*	810
Sirhind	198
Sirong	370
Sumbulpour	730
Surat	756
Visiapour	916
Warangole	985

TABLE VI.—HYDRABAD *to*

	British Miles.
Adoni	175
Agimere	800
Allahabad	703
Amedabad	661
Amednagur	335
Arcot	354
Aurungabad	295
Balasore	761
Bancapour (Sanore)	267
Bangalore	352
Baroach *or Broach*	549
Beder	78
Bednore	413
Bilsah	506
Bisnagur	264
Bopaltol	495
Burhanpour *by Jaffierabad*	380
by Aurungabad	417
Calberga	116
Calpy	715
Cambay	620
Canoul	127
Cattack	651
Chatterpour	623
Cheitore	713
Chitteldroog	322
Cicacole	412
Combam *or Commum*	145
Condanore	156
Condavir	131
Condapilly	142
Corah	728
Cuddapa	230
Dalmacherry	278
Dowlatabad	303
Ellichpour	319
Ellore	183
Fyzabad. *See Oude.*	
Ganjam	533
Goa	416
Golconda	5
Gooty	178
Guntoor. *See Condavir.*	
Gurramconda	275
Gurry-Mundlah	476
Gwalior	726
Hufsingabad Gaut	444
Jaffierabad	303
Jagarnaut	591
Jansi	684
Indore	550
Ingeram	272
Joinagur *or Jaepour*	829
Lahore	1369
Lucknow	795
Madras	352
Madura	613
Mahur *or Maor*	173
Mangalore	470
Masulipatam	203
Meerta	800
Mirzapour	722
Moorshedabad	1020
Mundu	498
Mysore	414
Nagpour	321
Narwah	679
Neermul	144
Omrautty	293
Ongole	164
Oude	811
Ougein *by Jaffierabad*	534
Patna *by Nugpour and Rewah*	914
Pondicherry	452
Poonah	387
Rachore	91
Rajamundry	237
Raolconda	144
Roydroog	252
Ruttunpour	551
Sagur	536
Sattarah	366
Seringapatam	406
Sindy *or Tatta*	1074
Sirong	553
Sirripy	317
Sollapour	144
Surat	575
Tanjore	522
Timerycotta	71
Tinevelly	709
Tritchinopoly	526
Visagapatam	355
Visiapour	269
Warangole	62
Yanam	272

TABLE VII.—LUCKNOW *to*

	British Miles.
Agimere	428
Allahabad	127
Amedabad	770
Arcot	1147
Aurungabad	696
Bahar	388
Bahraitch	73
Bareilly	156
Baroach	761
Belgram	70
Bilsah	367
Bidzigur	234
Bopaltol	398
Burhanpour	573
Buxar	232
Cabul	1118
Callinger *or Kawlinger*	149
Calpy	98
Canoge	75
Cashmere	866
Cattack	641
Cawnpour	49
Chanderee	270
Chatterpour	172
Cheitore	503
Chittigong	941
Chunar	197
Corah	67
Currah	93
Dacca	790
Dowlatabad	728
Dynapour	304
Etayah	144
Furruckabad	111
Fyzabad. *See Oude.*	
Ghod *or Gobud*	188
Goa	1115
Golconda	794
Goorackpour	170
Gwalior	211
Hurdwar	311
Jagurnaut	660
Jansi	190
Jionpour	147
Indore	522
Joinagur *or Jaepour*	338
Kairabad	31
Lahore	639
Mahomdy	92
Masulipatam *by Nagpour*	897
Meerta	493
Mindygaut	69
Mirzapour	182
Monghir	416
Moorshedabad	597
Moultan	742
Mundlah	337
Nagpour	474
Narwah	258
Oude *or Fyzabad*	85
Ougein	495
Patna	316
Pondicherry	1247
Poonah	882
Ramgaut	201
Rewah	182
Rotasgur	270
Ruttunpour	392
Sagur	300
Sattarah	920
Seringapatam	1201
Sindy *or Tatta*	1089
Sirong	318
Sultanpour	92
Sumbulpour	497
Visiapour	920

TABLE VIII.—MADRAS *to*

	British Miles.
Adoni	310
Agimere	1152
Allahabad	1055
Amedabad	1049
Anjenga	506
Arcot	73
Aurungabad	647
Balasore	689
Bancapour (Sanore)	416
Bandarmalanka	358
Bangalore	215
Baroach	947
Beder	430
Bednore	445
Bisnagur	386
Burhanpour *by Aurungabad*	769
by Jaffierabad	732
Cabul	2134
Calberga	422
Cambay	998
Canoge	1141
Canoul	279
Cashmere	1882
Cattack	779
Chatterpour	975
Cheitore	1065
Chitteldroog	335
Cicacole	540
Coimbetore	306
Combam *or Commum*	214
Comorin Cape (Arameny Gate)	440
Condapilly	306
Condavir	276
Conjaveram	46
Corah	1080
Cuddapa	153
Dalmacherry	115
Dindigul	275
Dowlatabad	655
Ellichpour	671
Ellore	310
Ganjam	661
Goa	575
Golconda	358
Gooty *or Gutti*	269
Guntoor. *See Condavir.*	
Gurramconda	153
Gwalior	1078
Jagarnaut	719
Indore	902
Ingeram	399
Lahore	1675
Madura *by Tanjore*	307
Mangalore	440
Masulipatam	292
Mirzapour	1074
Moorshedabad	1148
Mundu	850
Nagpour	673
Negapatam	183
Nellore	120
Oude	1163
Ougein	886
Palamcottah	401
Patna *by Nagpour*	1266
Pondicherry	100
Poonah	660
Rachore	323
Rajamundry	365
Raolconda	382
Ruttunpour	903
Sattarah	616
Seringapatam	290
Siccacollam	267
Sindy *or Tatta*	1467
Sirong	905
Sirripy	281
Surat	903
Tanjore	205
Timerycotta	278
Trankebar	165
Travancore	464
Tritchinopoly	268
Tutacorin	304
Velore	88
Visagapatam	483
Visiapour	534
Warangole	414
Yanam	400

TABLE IX.—NAGPOUR *to*

	British Miles.
Adoni	496
Allahabad	882
Amedabad	576
Amednagur	403
Arcot	675
Aurungabad	300
Balasore	592
Bareilly	576
Beder	302
Bednore *by Hydrabad*	734
Bilsah	249
Bisnagur	569
Boad	347
Bopaltol	238
Burhanpour	256
Burwa	383
Calberga	358
Calpy	394
Canoge	486
Cattack	482
Chanda	90
Chanderee	302
Chatterpour	302
Cheitore	510
Chetra *or Chittrab*	463
Chunargur	420
Cicacole	400
Condapilly	370
Condavir *or Guntoor*	385
Coomtah	93
Corah	407
Cuddapa	551
Dowlatabad	305
Ellichpour	122
Ellore	377
Gangpour	330
Ganjam *by Boad and Gumsoar*	480
Gawile *or Gyalgur*	137
Goa	640
Golconda	320
Gooty *or Gutti*	500
Gumsoar	434
Gurrah	160
Gwalior *by Hufsingabad*	480
Hufsingabad Gaut	187
Jagarnaut	500
Indore	371
Joinagur *or Jaepour*	540
Mahur *or Maor*	167
Masulipatam	423
Meerta	596
Mirzapour	401
Moorshedabad *by Cbuta Nagpour*	695
Mundilla	155
Nagpour *Little*	433
Narnalla	164
Narwah, *by Hufsingabad*	421
Neermul	177
Omrautty	113
Oude *or Fyzabad*	496
Ougein *by Bopaltol*	340
Panniput	703
Patna *by Ruttunpour*	577
by Rewah	593
Pondicherry	773
Poonah	486
Rachore	412
Ramgaut	588
Ramgur *in Babar*	483
Raypour	200
Rewah	804
Rotasgur	440
Ruttunpour	220
Sagur	215
Sattarah	526
Seringapatam	727
Sirong *by Hufsingabad*	295
Sonepour *or Jonepour*	300
Sumbulpour	292
Surat	516
Surgoojah	318
Tanjore	843
Tritchinopoly	847
Velore	670
Visagapatam	394
Visiapour	448
Warangole	258

TABLE X.—OUGEIN *to*

	British Miles.
Agimere	256
Allahabad	480
Amedabad	275
Amednagur	365
Arcot	905
Aurungabad	287
Baroach	266
Bareilly	503
Bafseen	448
Bilsah	140
Bisnagur	645
Bopaltol	112
Burhanpour	154
Calpy	382
Cambay	270
Canoge	464
Cattack *by Nagpour*	822
Chanderee	242
Chatterpour	320
Cheitore	169
Corah	426
Dowlatabad	280
Ellichpour	237
Etayah	402
Furruckabad	468
Fyzabad *or Oude*	583
Ghod *or Gobud*	356
Goa *by Poonah*	697
Golconda	539
Gwalior	336
Hindia	116
Hufsingabad Gaut	153
Jalore	220
Jansi	298
Jesselmere	365
Indore	38
Joinagur *or Jaepour*	285
Joudypour	260
Kotta	150
Meerta	256
Mirzapour	526
Moorshedabad *by Gurry-Mundlah*	983
by Patna	1007
Mundu	46
Mundilla	363
Naderbar *or Noondabar*	203
Nagore	305
Nagpour *Little*	780
Narwah *direct*	254
by Sirong	291
Oudipour	135
Patna	726
Pondicherry	998
Poonah *by Burhanpour*	442
Powangur	200
Ramgaut	488
Rantampour	260
Ruttunpour	508
Sagur	212
Sattarah	502
Seringapatam	876
Sirong	165
Sumbulpour	608
Surat	309
Visiapour	474

TABLE XI.—POONAH *to*

	British Miles.
Adoni	360
Agimere	670
Allahabad *by Sirong*	853
Amedabad	389
Amednagur	83
Arcot	624
Aurungabad	186
Balasore	1078
Bancapour (Sanore)	268
Bangalore	521
Barcilly	910
Baroach	287
Bafseen	114
Beder	310
Bednore	382
Bilsah	496
Bisnagur	300
Bopaltol	463
Burhanpour	288
Calberga	271
Callian	91
Calpy	768
Cambay	338
Canoge	842
Canoul	387
Cattack *by Nagpour*	968
Chandcree	620
Chatterpour	695
Cheitore	570
Chitteldroog	411
Condavir *or Guntoor*	528
Corah	812
Dalmacherry	548
Dowlatabad	184
Ellichpour	380
Ellore	570
Etayah	779
Furruckabad	847
Ghod *or Gobud*	726
Goa	245
Golconda	382
Gooty *or Gutti*	392
Gwalior	716
Hufsingabad Gaut	450
Jagarnaut *by Nagpour*	986
Jansi	674
Indore	450
Joinagur *or Jaepour*	737
Mangalore	455
Masulipatam	590
Mahur *or Maor*	355
Meerta	644
Mindygaut	844
Mirzapour *by Sirong*	900
by Nagpour	887
Moorshedabad *by Nagpour*	1181
Mundilla	641
Mundu	406
Naderbar	230
Nagpour *Little*	919
Narwah	669
Omrautty	373
Oude *or Fyzabad*	947
Panniput	985
Patna *by Sirong*	1090
by Nagpour	1063
Pawangur	352
Pondicherry	707
Poorundar	18
Rachore	357
Ramgaut	870
Ruttunpour	706
Rydroog	386
Sagur	556
Sattarah	63
Scringapatam	525
Sirong	543
Sumbulpour	778
Surat	243
Tanjore	762
Tatta *or Sindy*	807
Tritchinopoly	730
Velore	616
Visagapatam	742
Visiapour	136
Visrabuy	112

TABLE XII.—SERINGAPATAM *to*

	British Miles.
Adoni	243
Amednagur	541
Anjenga	325
Arcot	217
Aurungabad	599
Bancapour (Sanore)	231
Bangalore	74
Beder	432
Bednore	187
Bisnagur	260
Burhanpour	722
Calicut	129
Calberga	390
Canoul	279
Changamah	178
Chitteldroog	115
Cochin	214
Coimbetore	122
Combam *or Commum*	291
Comorin Cape	380
Condanore	250
Condapilly	444
Condavir *or Guntoor*	414
Cuddapa	220
Dalmacherry	202
Dindigul	198
Dowlatabad	606
Ellichpour	695
Ellore	448
Goa	335
Golconda	408
Gooty *or Gutti*	228
Gurramconda	172
Jagarnaut	860
Madura	240
Mangalore	162
Masulipatam	430
Mysore	8
Negapatam	296
Ongole	338
Onore	244
Palamcotta	317
Palicaudcherry	131
Pondicherry	260
Rachore	315
Raolconda	322
Roydroog	168
Sattarah	465
Sirripy	89
Sollapour	302
Tanjore	237
Tellicherry	128
Tinevelly. *See Palamcotta.*	
Timerycotta	363
Trankebar	295
Travancore	344
Tritchinopoly	205
Velore	202
Visiapour	405

APPENDIX.

ADVERTISEMENT.

THE within Tract has already made its appearance, in the Philosophical Transactions of 1781. It was suggested to the author, that it would make a very proper Appendix to the MEMOIR OF THE MAP OF HINDOOSTAN; and he accordingly offers it to the Public under that denomination: happy, should the Appendix meet a degree of indulgence, equal to what the Work itself has experienced.

AN

ACCOUNT

OF THE

GANGES

AND

BURRAMPOOTER RIVERS.

They gathering many a flood, and copious fed
With all the mellowed treasures of the sky,
Wind in progrefsive majesty along;
And traverse realms unknown, and blooming wilds,
And fruitful deserts——Forsaking these,
O'er peopled plains they fair-diffusive flow,
And many a nation feed, and circle safe,
Within their bosom many a happy isle.
Thus pouring on, they proudly seek the deep,
Whose vanquish'd tide, recoiling from the shock,
Yields to this liquid weight——

THOMSON'S SEASONS.

AN ACCOUNT, &c.

THE GANGES * and BURRAMPOOTER † rivers, together with their numerous branches and adjuncts, intersect the country of BENGAL (which, independent of BAHAR and ORISSA, is somewhat larger than GREAT BRITAIN) in such a variety of directions, as to form the most complete and easy inland navigation that can be conceived. So equally and admirably diffused are those natural canals, over a country that approaches nearly to a perfect plane, that, after excepting the lands contiguous to Burdwan, Birboom, &c. (which may be reckoned a sixth part of Bengal) we may safely pronounce, that every other part of the country, has, even in the dry season, some navigable stream within 25 miles at farthest; and more commonly, within a third part of that distance.

It is supposed, that this inland navigation gives constant employment to 30,000 boatmen. Nor will it be wondered at, when it is known, that all the salt, and a large proportion of the food, consumed by ten millions of people, are conveyed by water, within the kingdom of Bengal and its dependencies. To these must be added, the transport of the commercial exports and imports, probably to the amount of two millions sterling *per annum*; the interchange of manufactures and products, throughout the whole country; the fisheries; and the article of travelling. ‡

* The proper name of this river in the language of Hindoostan (or Indostan), is *Pudda* or *Padda*. It is also named *Burra Gonga*, or the Great River; and *Gonga*, the River, by way of eminence; and from this, doubtless, the European names of the river are derived.

† The orthography of this word, as given here, is according to the common pronunciation in Bengal; but it is said to be written in the Shanscrit language, *Brahma-pooter*; which signifies the Son of *Brahma*.

‡ The embarkations made use of, vary in bulk from 180 tons down to the size of a wherry. Those from 30 to 50 tons are reckoned the most eligible for transporting merchandize.

These rivers, which a late ingenious gentleman aptly termed sisters and rivals (he might have said *twin* sisters, from the contiguity of their springs), exactly resemble each other, in length of course; in bulk, until they approach the sea; in the smoothneſs and colour of their waters; in the appearance of their borders and islands; and, finally, in the height to which their floods rise, with the periodical rains. Of the two, the Burrampooter is the largest; but the difference is not obvious to the eye. They are now well known to derive their sources from the vast mountains of THIBET;* from whence they proceed in opposite directions; the Ganges seeking the plains of HINDOOSTAN (or INDOSTAN) by the west; and the Burrampooter by the east; both pursuing the early part of their course through rugged vallies and defiles, and seldom visiting the habitations of men. The Ganges, after wandering about 800 miles through these mountainous regions, iſsues forth a deity to the superstitious, yet gladdened, inhabitant of Hindoostan.† From Hurdwar (or Hurdoar), in latitude 30°, where it gushes through an opening in the mountains, it flows with a smooth navigable stream through delightful plains, during the remainder of its course to the sea (which is about 1350 miles), diffusing plenty immediately by means of its living productions; and secondarily by enriching the

* These are among the highest of the mountains of the old hemisphere. I was not able to determine their height; but it may in some measure be guesed, by the circumstance of their rising considerably above the horizon, when viewed from the plains of Bengal, at the distance of 150 miles.

† The fabulous account of the origin of the Ganges (as communicated by my learned and ingenious friend, Sir CHARLES BOUGHTON ROUSE), is, that it flows out of the foot of BESCHAN (the same with Vistnou, the PRESERVING DEITY), from whence, say the Brahmins, it has its name *Paddu*; that word signifying foot in the Shanscrit language: and that in its course to the plains of Hindoostan, it paſses through an immense rock shaped like a cow's head.

The allegory is highly expreſsive of the veneration which the Hindoos have for this famous stream; and no leſs so of their gratitude to the Author of Nature for bestowing it: for it describes the bleſsing as flowing purely from his bounty and goodneſs.

The rock before mentioned has, I believe, never been visited by any European; and is even allowed by most of the natives to bear no resemblance to the object from whence it is denominated. However, as the effects of superstition do often long survive the illusions that gave it birth, the rock or cavern still preserves its original name. [This note was written before it was known that M. Tiefentaller had visited it.]

adjacent lands, and affording an easy means of transport for the productions of its borders. In a military view, it opens a communication between the different posts, and serves in the capacity of a *military way* through the country; renders unneceſsary the forming of magazines; and infinitely surpaſses the celebrated inland navigation of North America, where the *carrying places* not only obstruct the progreſs of an army, but enable the adversary to determine his place and mode of attack with certainty.

In its course through the plains, it receives eleven rivers, some of which are equal to the Rhine, and none smaller than the Thames, besides as many others of leſser note. It is owing to this vast influx of streams, that the Ganges exceeds the Nile so greatly in point of magnitude, while the latter exceeds it in length of course by one-third. Indeed, the Ganges is inferior in this last respect, to many of the northern rivers of Asia; though I am inclined to think that it discharges as much or more water than any of them, because those rivers do not lie within the limits of the periodical rains.*

* The proportional lengths of course of some of the most noted rivers in the world are shewn nearly by the following numbers;

European rivers.	
Thames	1
Rhine	5¾
Danube	7
Wolga	9¼
Asiatic rivers.	
Indus (probably)	6½
Euphrates	8¾
Ganges	9½
Burrampooter	9¾
Nou Kian, or Ava river	9¾
Jennisea	10
Oby	10½
Amoor	11
Lena	11⅝
Hoanho (of China)	13⅜
Kian Keu (of ditto)	15½
African river.	
Nile	12½
American rivers.	
Miſsiſsipi	8
Amazons	15½

The bed of the Ganges is, as may be supposed, very unequal in point of width. From its first arrival in the plains at Hurdwar, to the conflux of the Jumnah (the first river of note that joins it), its bed is generally from a mile to a mile and a quarter wide; and, compared with the latter part of its course, tolerably straight. From hence, downward, its course becomes more winding, and its bed consequently wider,* till, having succeſsively received the waters of the Gogra, Soane, and Gunduck, besides many smaller streams, its bed has attained its full width; although, during the remaining 600 miles of its course, it receives many other principal streams. Within this space it is, in the narrowest parts of its bed, half a mile wide, and in the widest, three miles; and that, in places where no islands intervene. The stream within this bed is always either increasing or decreasing, according to the season. When at its lowest (which happens in April), the principal channel varies from 400 yards to a mile and a quarter; but is commonly about three quarters of a mile, in width.

The Ganges is fordable in some places above the conflux of the Jumnah, but the navigation is never interrupted. Below that, the channel is of considerable depth, for the additional streams bring a greater acceſsion of depth than width. At 500 miles from the sea, the channel is thirty feet deep when the river is at its lowest; and it continues at least this depth to the sea, where the sudden expansion of the stream deprives it of the force neceſsary to sweep away the bars of sand and mud thrown acroſs it by the strong southerly winds; so that the principal branch of the Ganges cannot be entered by large veſsels.

About 220 miles from the sea (but 300 reckoning the windings of the river), commences the head of the *delta* of the Ganges; which is considerably more than twice the area of that of the Nile.

* This will be explained when the windings of the river are treated of.

The two westernmost branches, named the Cofsimbuzar and Jellinghy rivers, unite, and form what is afterwards named the Hoogly river; which is the port of Calcutta, and the only branch of the Ganges that is commonly navigated by ships.* The Cossimbuzar river is almost dry, from October to May: and the Jellinghy river (although a stream runs in it the whole year) is in some years unnavigable during two or three of the driest months; so that the only subordinate branch of the Ganges, that is at all times navigable, is the Chundnah river, which separates at Moddapour, and terminates in the Hooringotta.

That part of the delta bordering on the sea, is composed of a labyrinth of rivers and creeks, all of which are salt, except those that immediately communicate with the principal arm of the Ganges. This tract, known by the name of the Woods, or *Sunderbunds*, is in extent equal to the principality of WALES; and is so completely enveloped in woods, and infested with tygers, that if any attempts have ever been made to clear it (as is reported), they have hitherto miscarried. Its numerous canals are so disposed, as to form a complete inland navigation, throughout and acrofs the lower part of the delta; without either the delay of going round the head of it, or the hazard of putting to sea. Here salt, in quantities equal to the whole consumption of Bengal and its dependencies, is made and transported with equal facility: and here also is found an inexhaustible store of timber for boat-building. The breadth of the lower part of this delta is upwards of 180 miles; to which, if we add that of the two branches of the river

* The Hoogly river, or westernmost branch of the Ganges, has a much deeper outlet to the sea, than the principal branch. Probably this may be owing to its precipitating a leſs quantity of mud than the other; the quantity of the Ganges water discharged here being leſs than in the other, in the proportion of one to six. From the difficulties that occur in navigating the entrance of the Hoogly river, many are led to suppose, that the channels are shallow. The difficulties, however, arise from bringing the ships *acroſs* some of the sand-banks, which project so far into the sea, that the channels between them cannot easily be traced from without.

that bound it, we shall have about 200 miles for the distance to which the Ganges expands its branches, at its junction with the sea.

It has been observed before, that the course of this river, from Hurdwar to the sea, is through an uniform plain; or, at least, what appears such to the eye: for, the declivity is much too small to be perceptible. A section of the ground, parallel to one of its branches, in length 60 miles, was taken by order of Mr. HASTINGS; and it was found to have about nine inches descent in each mile, reckoning in a straight line, and allowance being made for the curvature of the earth. But the windings of the river were so great, as to reduce the declivity on which the water ran, to lefs than four inches *per* mile: and by a comparison of the velocity of the stream at the place of experiment, with that in other places, I have no reason to suppose, that its general descent exceeds it.*

The mean rate of motion of the Ganges, is lefs than three miles an hour, in the dry months. In the wet season, and whilst the waters are draining off, from the inundated lands, the current runs from five to six miles an hour: and there are instances of its running seven, and even eight miles, in particular situations, and under certain circumstances. I have an experiment of my own on record, in which a boat was carried 56 miles in eight hours; and that against so strong a wind, that the boat had evidently no progrefsive motion through the water.

When we consider, that the velocity of the stream is three miles in one season, and five or more in the other, on the same descent of four inches *per* mile; and, that the motion of the inundation is only half a mile *per* hour, on a much greater descent; no farther

* M. DE CONDAMINE found the descent of the river Amazons, in a straight course of about 1860 miles, to be about 1020 English feet, or $6\frac{1}{2}$ inches in a mile. If we allow for the windings (which in the Ganges are about one mile and $\frac{1}{2}$ in three, taking its whole course through the plains), it probably would not exceed 4 inches in a mile.

proof is required, how small the proportion of velocity is, that the descent communicates. It is then, to the *impetus* originating at the spring head, or at the place where adventitious waters are poured in, and succeſsively communicated to every part of the stream, that we are principally to attribute the velocity; which is greater or leſser, according to the quantity of water poured in.

In common, there is found on one side of the river an almost perpendicular bank, more or leſs elevated above the stream, according to the season, and with deep water near it: and on the opposite side, a bank, shelving away so gradually, as to occasion shallow water, at some distance from the margin. This is more particularly the case, in the most winding parts of the river, because the very operation of winding, produces the steep and shelving banks:* for the current is always strongest on the external side of the curve, formed by the serpentine course of the river; and its continual action on the banks, either undermines them,† or washes them down. In places where the current is remarkably rapid, or the soil uncommonly loose, such tracts of land are swept away in the course of one season, as would astonish those who have not been eye-witneſses to the magnitude and force of the mighty streams, occasioned by the periodical rains of the tropical regions. This neceſsarily produces a gradual change in the course of the river; the quantity lost on the one side, being added to the other, by the mere operation of the stream: for the fallen pieces of the bank, diſsolve quickly into muddy sand; which is hurried away by the current, along the border of the channel, to the point, from whence the river turns off, to form the next reach; where the stream growing weak, it finds

* Hence it is, that the section of a river, that winds through a loose soil, approaches nearly to an obtuse angled-triangle, one of whose sides is exceedingly short and disproportioned to the other two . But when a river perseveres in a straight course, the section becomes nearly the half of an ellipsis divided longitudinally . See Plate I. page 364.

† In the dry season some of these banks are more than 30 feet high, and often fall down in pieces of many tons weight, and occasion so sudden and violent an agitation of the water, as sometimes to sink large boats that happen to be near the shore.

a resting-place; and helps to form a shelving bank, which commences at the point, and extends downwards, along the side of the succeeding reach.

To account for the slacknefs of the current at the point, it is neceſsary to observe, that the strongest part of it, instead of turning short round the point, preserves for some time, the direction given it by the last steep bank: and is accordingly thrown obliquely acroſs the bed of the river, to the bay on the opposite side; and pursues its course along it, till the intervention of another point again obliges it to change sides. See Plate I.

In those few parts of the river that are straight, the banks undergo the least alteration,* as the current runs parallel to them; but the least inflection of course, has the effect of throwing the current against the bank; and if this happens in a part where the soil is composed of loose sand, it produces in time a serpentine winding.

It is evident, that the repeated additions made to the shelving bank before mentioned, become in time an encroachment on the channel of the river; and this is again counter-balanced by the depredations made on the opposite steep bank, the fragments of which either bring about a repetition of the circumstances above recited, or form a bank or shallow in the midst of the channel. Thus a steep and a shelving bank, are alternately formed, in the crooked parts of the river (the steep one being *the indented* side, and the shelving one the *projecting)*; and thus a continual fluctuation of course is induced in all the winding parts of the river; each meander having a perpetual tendency to deviate more and more from the line of the general course of the river, by eating deeper into the bays, and at the same time adding to the points; till either the opposite bays

* It is more than probable, that the straight parts owe their existence to the tenacity of the soil of which their banks are composed. Whatever the cause may be, the effect very clearly points out such situations, as the properest for placing towns in.

meet, or the stream breaks through the narrow isthmus, and restores a temporary straightnefs to the channel.

Several of the windings of the Ganges, and its branches, are fast approaching to this state; and in others, it actually exists at present. The experience of these changes, should operate against attempting canals of any length, in the higher parts of the country; and I much doubt, if any in the lower parts would long continue navigable. During eleven years of my residence in Bengal, the outlet or head of the Jellinghy river, was gradually removed three quarters of a mile farther down: and by two surveys of a part of the adjacent bank of the Ganges, taken about the distance of nine years from each other, it appeared that the breadth of an English mile and a half had been taken away. This is, however, the most rapid change that I have noticed; a mile in ten or twelve years being the usual rate of encroachment, in places where the current strikes with the greatest force; namely, where two straight reaches, meet at a small angle. In such situations, it not unfrequently excavates gulfs * of considerable length within the bank. These gulfs are in the direction of the strongest parts of the stream; and are in fact the *young shoots* (if I may so expref myself) which in time strike out and become branches of the river: for we generally find them at those turnings that have the smallest angles.†

Two causes, widely different from each other, occasion the meandering courses of rivers: the one, the irregularity of the ground through which they run, which obliges them to wander in quest of a declivity; the other, the loosenefs of the soil, which yields

* The Count De Buffon advises the digging of such gulfs in the banks of ordinary rivers, with a view to divert the current, when bridges or other buildings are endangered by it.

† The courses of these branches at the efflux, generally, if not always, become retrograde to the course of the river; for, a sand-bank, accumulating at the upper point of separation, gives an oblique direction, upwards, to the stream, which would otherwise run out at right-angles. This sand-bank being always on the increase, occasions a corrosion of the opposite bank: and by this means, all, or most of the outlets, have a progrefsive motion downwards; as has been remarked of the Jellinghy river.

to the friction of the border of the stream. The meanders in the first case, are, of course, as digreſsive and irregular as the surface they are projected on: but, in the latter, they are so far reducible to rule, that rivers of unequal bulk will, under similar circumstances, take a circuit to wind in, whose extent is in proportion to their respective breadths: for, I have observed, that when a branch of a river is fallen so low, as to occupy only a part of its bed, it no longer continues in the line of its old course; but works itself a new channel, which winds from side to side, acroſs the former one. I have observed too, that in two streams, of equal size, that which has the slowest current has also the smallest windings: for as these (in the present case) are solely owing to the depredations made on the banks, by the force of the current; so the extent of these depredations, or, in other words, the dimensions of the windings, will be determined by the degree of force acting on the banks.

The windings of the Ganges in the plains, are, doubtleſs, owing to the looseneſs of the soil: and (I think) the proof of it is, that they are perpetually changing; which those, originally induced by an inequality of surface, can seldom, or never do.*

I can easily suppose, that if the Ganges was turned into a straight canal, cut through the ground it now traverses, in the most winding parts of its course; its straightneſs would be of short duration. Some yielding part of the bank, or that which happened to be the most strongly acted on, would first be corroded or diſsolved: thus a bay or cavity would be formed, in the side of the bank. This begets an inflection of the current; which, falling obliquely on the side of the bay, corrodes it inceſsantly. When the current has paſsed the innermost part of the bay, it receives a new direction, and

* It has been remarked, that the courses of rivers become more winding as they approach the sea. This, I believe, will only hold good, in such as take their course through a soil which has been formed from the depositions of their own waters. In the Ganges, and other rivers subject to considerable variations in the bulk of their streams, the best marks of the vicinity of the sea, are, the lowneſs of the river banks, and the increasing muddineſs of the shallows in its bed.

is thrown obliquely towards the opposite side of the canal, depositing in its way, the matter excavated from the bay; and which begins to form a shallow or bank, contiguous to the border of the canal. Here then is the origin of such windings, as owe their existence to the nature of the soil. The bay, so corroded, in time becomes large enough to give a new direction to the body of the canal: and the matter excavated from the bay, is so disposed as to aſsist in throwing the current against the opposite bank; where a proceſs, similar to that I have been describing, will be begun.

The action of the current on the bank, will also have the effect of deepening the border of the channel near it; and this again increases the velocity of the current in that part. Thus would the canal gradually take a new form, till it became what the river now is. Even when the windings have leſsened the descent one half, we still find the current too powerful for the banks to withstand it.

There are not wanting instances of a total change of course in some of the Bengal rivers.* The Cosa river (equal to the Rhine) once ran by Purneah, and joined the Ganges opposite Rajemal. Its junction is now 45 miles higher up. Gour, the ancient capital of Bengal, stood on the old bank of the Ganges: although its ruins are 4 or 5 miles from the present bank.

Appearances favour very strongly the opinion, that the Ganges had its former bed, in the tract now occupied by the lakes and moraſses, between Nattore and Jaffiergunge; striking out of its present course at Bauleah, and paſsing by Pootyah. With an equal degree of probability (favoured by tradition), we may trace its supposed course by Dacca, to a junction with the Burrampooter or Megna near Fringybazar; where the accumulation of two such mighty streams, probably scooped out the present amazing bed of the MEGNA.† See plate II.

* The Mootyjyl lake is one of the windings of a former channel of the Coſsimbuzar river.

† *Megna* and *Burrampooter* are names belonging to the same river in different parts of its course. The Megna falls into the Burrampooter; and, though a much smaller river, communicates its name to the other during the rest of its course.

In tracing the sea coast of the delta, we find no leſs than eight openings; each of which, without hesitation, one pronounces to have been in its time, the principal mouth of the Ganges. Nor is the occasional deviation of the principal branch, probably, the only cause of fluctuation, in the dimensions of the delta. One observes that the deltas of most capital rivers (the tropical ones particularly) encroach upon the sea. Now, is not this owing to the mud and sand brought down by the rivers, and gradually deposited, from the remotest ages, down to the present time? The rivers, we know, are loaded with mud and sand at their entrance into the sea; and we also know, that the sea recovers its transparency, at the distance of twenty leagues from the coast: which can only arise from the waters having precipitated their earthy particles within that space. The sand and mud banks at this time, extend twenty miles off some of the islands, in the mouths of the Ganges and Burrampooter; and rise in many places within a few feet of the surface. Some future generation will probably see these banks rise above water, and succeeding ones poſsefs and cultivate them! Next to earthquakes, perhaps the floods of the tropical rivers, produce the quickest alterations in the face of our globe. Extensive islands are formed in the channel of the Ganges, during an interval far short of that of a man's life; so that the whole proceſs is completed, in a period that falls within the compaſs of his observation.* Some of these islands, four or five miles in extent, are formed at the angular turnings of the river, and were originally large sand banks thrown up round the points (in the manner before described), but afterwards insulated by breaches of the river. Others are formed in the straight parts of the river, and in the middle of the stream; and owe their origin to some obstruction lurking at the bottom. Whether this be the fragments of the river bank; a large tree swept down from it; or a sunken boat; it is sufficient for a foundation: and a heap

* Accordingly, the laws respecting alluvion are ascertained with great precision.

of sand is quickly collected below it. This accumulates amazingly fast: in the course of a few years, it peeps above water, and having now usurped a considerable portion of the channel, the river borrows on each side to supply the deficiency in its bed; and in such parts of the river we always find steep banks on both sides.* Each periodical flood brings an addition of matter to this growing island; increasing it in height as well as extension, until its top is perfectly on a level, with the banks that include it: and at that period of its growth, it has mould enough on it for the purposes of cultivation; which is owing to the mud left on it when the waters subside, and is indeed a part of the economy which nature observes, in fertilizing the lands in general.

While the river is forming new islands in one part, it is sweeping away old ones in other parts. In the progress of this destructive operation, we have opportunities of observing, by means of the sections of the falling bank; the regular distribution of the several *strata* of sand and earths, lying above one another in the order in which they decrease in gravity. As they can only owe this disposition to the agency of the stream that deposited them, it would appear, that these substances are suspended at different heights in the stream, according to their respective gravities. We never find a stratum of earth under one of sand; for the muddy particles float nearest the surface.† I have counted seven distinct strata in a section of one of these islands. Indeed, not only the islands, but most of the river banks wear the same appearance: for as the river is always changing its present bed, and verging towards the site of some former one, now obliterated, this must necessarily be the case.

* This evidently points out the means for preventing encroachments on a river bank in the straight parts of its course, *viz.* to remove the shallows that accumulate in the middle of its channel.

† A glass of water taken out of the Ganges, when at its height, yields about one part in four of mud. No wonder then that the subsiding waters should quickly form a stratum of earth; or that the delta should encroach upon the sea!

As a strong presumptive proof of the wandering of the Ganges, from the one side of the delta to the other, I must observe, that there is no appearance of *virgin* earth, between the Tiperah hills on the east, and the province of Burdwan on the west; nor on the north till we arrive at Dacca and Bauleah. In all the sections of the numerous creeks and rivers in the delta, nothing appears but sand and black mould in regular strata, till we arrive at the clay, that forms the lower part of their beds. There is not any substance so coarse as gravel, either in the delta, or nearer the sea than 400 miles,* where a rocky point, a part of the base of the neighbouring hills, projects into the river: but in places remote from the great rivers, the soil is either red, yellow, or of a deep brown.

I come now to the particulars of the annual swelling and overflowing of the Ganges.†

It appears to owe its increase as much to the rain water that falls in the mountains contiguous to its source, and to the sources of the great northern rivers that fall into it, as to that which falls in the plains of Hindoostan: for it rises fifteen feet and a half out of thirty-two (the sum total of its rising) by the latter end of June: and it is well known, that the rainy season does not begin in most of the flat countries, till about that time. In the mountains, it begins early in ‡ April; and by the latter end of that month, when the rain water has reached Bengal, the rivers begin to rise; though by very slow degrees: for the increase is only about an inch *per*

* At Oudanulla.

† An opinion has long prevailed, that the swelling of the Ganges, previous to the commencement of the rainy season in the flat countries, is in a great measure owing to the melting of the snow in the mountains. I will not go so far as totally to disallow the fact; but can by no means suppose, that the quantity of snow water bears any proportion to the increase of the river.

‡ The vast collection of vapours, wafted from the sea by the southerly or south-west monsoon, are suddenly stopped by the lofty ridge of mountains that runs from east to west through Thibet. It is obvious, that the accumulation and condensation of these vapours, must first happen in the neighbourhood of the obstacle; and successively in places more remote, as fresh supplies arrive to fill the atmosphere. Hence the priority of commencement of the rainy season, in places that lie nearest the mountains.

day, for the first fortnight. It then gradually augments to two and three inches, before any quantity of rain falls in the flat countries; and when the rain becomes general, the increase, at a medium, is five inches *per* day. By the latter end of July, all the lower parts of Bengal, contiguous to the Ganges and Burrampooter, are overflowed, and form an inundation of more than a hundred miles in width; nothing appearing but villages and trees, excepting very rarely, the top of an elevated spot (the artificial mound of some deserted village) appearing like an island.

The inundations in Bengal, differ from those in Egypt in this particular, that the Nile owes its floods *entirely* to the rain-water that falls in the mountains near its source; but the inundations in Bengal, are as much occasioned by the rain that falls there, as by the waters of the Ganges; and as a proof of it, the lands in general are overflowed to a considerable height, long before the bed of the river is filled. It must be remarked, that the ground adjacent to the river bank, to the extent of some miles, is considerably higher than the rest of the country,* and serves to separate the waters of the inundation, from those of the river, until it overflows. This high ground, is in some seasons, covered a foot or more; but the height of the inundation within, varies, of course, according to the irregularities of the ground; and is in some places twelve feet.

Even when the inundation becomes general, the river still shews itself, as well by the grafs and reeds on its banks, as by its rapid and muddy stream; for the water of the inundation acquires a blackish

All the rivers that are situated within the limits of the monsoons, or shifting trade-winds, are subject to overflowings at annually stated periods, like the Ganges: and these periods return during the season of the wind that brings vapours from the sea (which in Bengal, &c. is the southerly one) and this being periodical, the falls of rain must neceſsarily be so too.

The northerly wind, which blows only over the land, is dry; for no rain (except casual showers) falls during the continuance of that monsoon.

* This property of the bank is well accounted for by Count Buffon, who imputes it to the precipitation of mud, made by the waters of the river, when it overflows. The inundation, says he, purifies itself as it flows over the plain; so that the precipitation must be greatest on the parts nearest to the margin of the river.

hue, by having been so long stagnant, among grafs and other vegetables: nor does it ever lose this tinge, which is a proof of the predominancy of the rain-water over that of the river; as the slow rate of motion of the inundation (which does not exceed half a mile *per* hour) is of the remarkable flatnefs of the country.

There are particular tracts of lands, which, from the nature of their culture, and species of productions, require lefs moisture than others; and yet, by the lownefs of their situation, would remain too long inundated, were they not guarded by dikes or dams, from so copious an inundation as would otherwise happen, from the great elevation of the surface of the river above them. These dikes are kept up at an enormous expence; and yet do not always succeed, for want of tenacity in the soil of which they are composed. It is calculated that the length of these dikes collectively, amounts to more than a thousand English miles. Some of them, at the base, are equal to the thicknefs of an ordinary rampart. One particular branch of the Ganges (navigable only during the rainy season, but then equal to the Thames at Chelsea) is conducted between two of these dikes, for about 70 miles: and when full, the passengers in the boats, look down on the adjacent country, as from an eminence.

During the swoln state of the river, the tide totally loses its effect of counteracting the stream; and in a great measure that of ebbing and flowing, except very near the sea. It is not uncommon for a strong wind, that blows up the river for any continuance, to swell the waters two feet above the ordinary level at that season: and such accidents have occasioned the lofs of whole crops of rice.* A very tragical event happened at Luckipour † in 1763, by a strong gale

* The rice I speak of is of a particular kind; for the growth of its stalk keeps pace with the increase of the flood at ordinary times, but is destroyed by a too sudden rise of the water. The harvest is often reaped in boats. There is also a kind of grafs which overtops the flood in the same manner, and at a small distance has the appearance of a field of the richest verdure.

† About fifty miles from the sea.

of wind conspiring with a high spring tide, at a season when the periodical flood was within a foot and a half of its highest pitch. It is said that the waters rose six feet above the ordinary level. Certain it is, that the inhabitants of a considerable district, with their houses and cattle, were totally swept away; and, to aggravate their distreſs, it happened in a part of the country, which scarce produces a single tree, for a drowning man to escape to.

Embarkations of every kind traverse the inundation: those bound upwards, availing themselves of a direct course and still water, at a season when every stream rushes like a torrent. The wind, too, which at this season blows regularly from the south-east,* favours their progreſs; insomuch that a voyage, which takes up nine or ten days by the course of the river, when confined within its banks, is now effected in six. Husbandry and grazing are both suspended; and the peasant traverses in his boat, those fields which in another season he was wont to plow; happy that the elevated site of the river banks, places the herbage they contain, within his reach; otherwise his cattle must perish.

The following is a table of the gradual increase of the Ganges and its branches, according to observations made at Jellinghy and Dacca.

At Jellinghy.	Ft.	In.	At Dacca. Ft.	In.
In May it rose - - -	6	0	2	4
June - - -	9	6	4	6
July - - - -	12	6	5	6
In the first half of August -	4	0	1	11
	32	0	14	3

* Although in the gulf or bay of Bengal the monsoon blows from the S S W and S W, yet in the eastern and northern parts of Bengal it blows from the S E or E S E.

These observations were made in a season, when the waters rose rather higher than usual; so that we may take 31 feet for the mean of the increase.

It must be observed, that the Ganges rises in a more considerable degree than the northern rivers that communicate with it, in the lower parts of its course (the Burrampooter excepted): and this is evident by the different circumstances that take place on the mixing of the waters of the Ganges and Teesta rivers, in the different seasons. The Teesta is a large river which runs almost parallel to the Ganges, for near 150 miles. During the dry season, the waters of the Teesta run into those of the Ganges by two distinct channels, situated about twenty miles from each other: and a third channel at the same time discharges itself into the Megna. But during the season of the floods, the Ganges runs into the Teesta, whose outlet is then confined to the channel that communicates with the Megna. This alone is sufficient to shew how trifling the descent of these rivers must be, whose courses are thus regulated (not by the declivity of their beds, but) by their heights in respect to each other; which, like the flux and reflux of the tide, have the effect of giving contrary directions to the stream, at different seasons.

The inundation is nearly at a stand for some days preceding the middle of August, when it begins to run off; for although great quantities of rain fall in the flat countries, during August and September, yet, by a partial cessation of the rains in the mountains, there happens a deficiency in the supplies necessary to keep up the inundation.* The quantity of the daily decrease of the river is nearly in the following proportion; during the latter half of August, and all September, from three to four inches; from September

* I have stated the middle of August for the period when the waters begin to run off; and in general it happens with as much regularity as the vicissitudes of the seasons do. But there are exceptions to it; for in the year 1774 the rivers kept up for near a month after the usual time.

to the end of November, it gradually lefsens from three inches to an inch and a half; and from November, to the latter end of April, it is only half an inch *per* day at a medium. These proportions must be understood to relate to such parts of the river as are removed from the influence of the tides; of which more will be said presently. The decrease of the inundation does not always keep pace with that of the river, by reason of the height of the banks; but after the beginning of October, when the rain has nearly ceased, the remainder of the inundation goes off quickly by evaporation; leaving the lands highly manured, and in a state fit to receive the seed, after the simple operation of plowing.

There is a circumstance attending the increase of the Ganges, and which, I believe, is little known or attended to; because few people have made experiments on the heights, to which the periodical flood rises, in different places. The circumstance I allude to, is, the difference of the quantity of the increase (as expreſsed in the foregoing table) in places more or leſs remote from the sea. It is a fact, confirmed by repeated experiments, that from about the place where the tide commences, to the sea, the height of the periodical increase diminishes gradually, until it totally disappears at the point of confluence. Indeed, this is perfectly conformable to the known laws of fluids: the ocean preserves the same level at all seasons (under similar circumstances of tide), and neceſsarily influences the level of all the waters that communicate with it, unleſs precipitated in the form of a cataract. Could we suppose, for a moment, that the increased column of water, of 31 feet perpendicular, was continued all the way to the sea, by some preternatural agency: whenever that agency was removed, the head of the column would diffuse itself over the ocean, and the remaining part would follow, from as far back as the influence of the ocean extended; forming a slope, whose perpendicular height would be 31 feet. This is the preeise state in which we find it. At the point of junction with the

sea, the height is the same in both seasons, at equal times of the tide. At Luckipour, there is a difference of about six feet between the heights in the different seasons; at Dacca, and places adjacent, 14; and at Custee, 31 feet. Here then is a regular slope; for the distances between the places, bear a proportion to the respective heights. This slope must add to the rapidity of the stream; for, supposing the descent to have been originally four inches *per* mile, this will increase it to about five and a half. Custee is about 240 miles from the sea, by the course of the river; and the surface of the river there, during the dry season, is about 80 feet above the level of the sea at high water.* Thus far does the ocean manifest its dominion in both seasons: in the one by the ebbing and flowing of its tides; and in the other by depreſsing the periodical flood, till the surface of it coincides as nearly with its own, as the descent of the channel of the river will admit.†

Similar circumstances take place in the Jellinghy, Hoogly, and Burrampooter rivers; and, I suppose, in all others that are subject either to periodical, or occasional swellings.

Not only does the flood diminish near the sea, but the river banks diminish in the same proportion; so that in the dry season, the height of the periodical flood may be known by that of the bank.

I am aware of an objection that may be made to the above solution; which is, that the lowneſs of the banks in places near the sea, is the true reason why the floods do not attain so considerable

* The tides in the river Amazons are perceptible at 600 miles above its mouth; but at an elevation of only 90 feet, according to M. De Condamine. It remains to be told what the state of the river was, at the time of making the experiment; because the land-floods have the effect of shortening the limits of the tide's way.

† The Count De Buffon has slightly mentioned this circumstance attending the swelling of rivers; but imputes it to the increased velocity of the current, as the river approaches the sea: which, says he, carries off the inundation so quick, as to abate its height. Now (with the utmost deference to so great an authority) I could never perceive, that the current, either in the Ganges, or any other river, was stronger near the sea than at a distance from it. Even if we admit an acceleration of the current during the ebb-tide, the flux retards it in so considerable a degree, as at least to counterbalance the effects produced by the temporary increase of velocity.

a height, as in places farther removed from it, and where the banks are high; for that the river, wanting a bank to confine it, diffuses itself over the surface of the country. In answer to this, I shall observe, that it is proved by experiment, that at any given time, the quantity of the increase in different places, bears a just proportion to the sum total of the increase in each place respectively: or, in other words, that when the river has risen three feet at Dacca, where the whole rising is about 14 feet; it will have rose upwards of six feet and a half at Custee, where it rises 31 feet in all.

The quantity of water discharged by the Ganges, in one second of time, during the dry season, is 80,000 cubic feet; but the river, when full, having thrice the volume of water in it, that it had at the time when the experiment was made; and its motion being also accelerated in the proportion of five to three; the quantity discharged in a second at that season is 405,000 cubic feet. If we take the medium the whole year through, it will be nearly 180,000 cubic feet in a second.

THE BURRAMPOOTER, which has its source from the opposite side of the same mountains that give rise to the Ganges, first takes its course eastward, or directly opposite to that of the Ganges, through the country of Thibet, where it is named *Sanpoo* or *Zanciu*, which bears the same interpretation as the Gonga of Hindoostan; namely, THE RIVER. The course of it through Thibet, as given by Father DU HALDE, and formed into a map by Mr. D'ANVILLE, though sufficiently exact for the purposes of general geography, is not particular enough to ascertain the precise length of its course. After winding with a rapid current through Thibet, it washes the

border of the territory of Lafsa (in which is the residence of the Grand Lama) and then deviating from an east to a south-east course, it approaches within 220 miles of Yunan, the westernmost province of China. Here it appears, as if undetermined whether to attempt a paſsage to the sea, by the gulf of Siam, or by that of Bengal; but seemingly determining on the latter, it turns suddenly to the west through Aſsam, and enters Bengal on the north-east. I have not been able to learn the exact place where it changes its name; but as the people of Aſsam call it Burrampoot, it would appear, that it takes this name on its entering Aſsam. After its entry into Bengal, it makes a circuit round the western point of the Garrow mountains; and then, altering its course to south, it meets the Ganges about 40 miles from the sea.

Father Du Halde expreſses his doubts, concerning the course that the Sanpoo takes, after leaving Thibet; and only supposes generally, that it falls into the gulf of Bengal. M. D'Anville, his geographer, not without reason, supposed the Sanpoo and Ava river to be the same; being justified by the information which his materials afforded him: for the Burrampooter was represented to him, as one of the inferior streams that contributed its waters to the Ganges, and not as its equal or superior; and this was sufficient to direct his researches, after the mouth of the Sanpoo river, to some other quarter. The Ava river, as well from its bulk, as the bent of its course for some hundred miles above its mouth, appeared to him to be a continuation of the river in question: and it was accordingly described as such in his maps, the authority of which was justly esteemed as decisive; and, till the year 1765, the Burrampooter, as a capital river, was unknown in Europe.

On tracing this river in 1765, I was no leſs surprised, at finding it rather larger than the Ganges, than at its course previous to its entering Bengal. This I found to be from the east; although all the former accounts represented it as from the north: and this un-

expected discovery soon led to inquiries, which furnished me with an account of its general course, to within 100 miles of the place where DU HALDE left the Sanpoo. I could no longer doubt, that the Burrampooter and Sanpoo were one and the same river: and to this was added the positive aſsurances of the Aſsamers, "That "*their* river came from the north-west, through the Bootan moun- "tains." And to place it beyond a doubt, that the Sanpoo river is not the same with the river of Ava, but that this last is the great *Nou Kian* of Yunan; I have in my poſseſsion a manuscript draught of the Ava river, to within 150 miles of the place where DU HALDE leaves the Nou Kian, in its course towards Ava; together with very authentic information that this river (named *Irabatty* by the people of Ava) is navigable from the city of Ava into the province of Yunan in China.*

The Burrampooter, during a course of 400 miles through Bengal, bears so intimate a resemblance to the Ganges, except in one particular, that one description may serve for both. The exception I mean, is, that during the last 60 miles, before its junction with the Ganges, it forms a stream which is regularly from four to five miles wide; and but for its freshneſs might paſs for an arm of the sea. Common description fails in an attempt to convey an adequate idea of the grandeur of this magnificent object; for,

> ——Scarce the muse
> Dares stretch her wing o'er this enormous maſs
> Of rushing water; to whose dread expanse,
> Continuous depth, and wond'rous length of course,
> Our floods are rills——

THOMSON'S SEASONS.

* My information comes from a person who had resided at Ava. See the Memoir, Page 296, and also the Modern Universal History, Vol. VI. page 205.

I have already endeavoured to account for the singular breadth of the Megna, by supposing that the Ganges once joined it where the Iſamutty now does; and that their joint waters scooped out its present bed. The present junction of these two mighty rivers below Luckipour, produces a body of running fresh water, hardly to be equalled in the old hemisphere; and, perhaps, not exceeded in the new. It now forms a gulf interspersed with islands, some of which rival, in size and fertility, our Isle of Wight. The water at ordinary times is hardly brackish at the extremities of these islands; and, in the rainy season, the sea (or at least the surface of it) is perfectly fresh to the distance of many leagues out.

The *bore* (which is known to be a sudden and abrupt influx of the tide, into a river or narrow strait) prevails in the principal branches of the Ganges, and in the Megna; but the Hoogly river, and the paſsages between the islands and sands situated in the gulf, formed by the confluence of the Ganges and Megna, are more subject to it than the other rivers. This may be owing, partly, to their having greater *embouchures* in proportion to their channels, than the others have; by which means, a larger proportion of tide, is forced through a paſsage comparatively smaller; and partly, to there being no capital openings near them, to draw off any considerable portion of the accumulating tide. In the Hoogly or Calcutta river, the *bore* commences at Hoogly Point (the place where the river first contracts itself), and is perceptible above Hoogly town; and so quick is its motion, that it hardly employs four hours in travelling from one to the other, although the distance is near 70 miles. At Calcutta it sometimes occasions an instantaneous rise of five feet: and both here, and in every other part of its track, the boats, on its approach, immediately quit the shore, and make for safety to the middle of the river.

In the channels, between the islands in the mouth of the Megna, &c. the height of the *bore* is said to exceed twelve feet; and is so

terrific in its appearance, and dangerous in its consequences, that no boat will venture to paſs at spring tide. After the tide is fairly past the islands, no vestige of a *bore* is seen, which may be owing to the great width of the Megna, in comparison with the paſsages between the islands; but the effects of it are visible enough, by the sudden rising of the tides.

THE rivers are in a tranquil state, from the time of the change of the monsoon in October, to the middle of March; when the *northwesters* begin in the eastern parts of BENGAL (though later as we advance westwards) and may be expected once in three or four days, until the commencement of the rainy season. These *northwesters*, which have their denomination from the quarter they usually originate in, are the most formidable enemies that are met with, in this inland navigation; they being sudden and violent squalls of wind and rain; and though of no long duration, are often attended with fatal effects, if not carefully guarded against; whole fleets of trading boats having been sunk by them almost instantaneously. They are more frequent in the eastern, than in the western part of BENGAL; and happen oftener towards the close of the day, than at any other time. As they are indicated some hours before they arrive, by the rising and very singular appearance of the clouds, the traveller has commonly time enough to seek a place of shelter. It is in the great rivers alone, that they are so truly formidable: and that about the latter end of May, and beginning of June, when the rivers are much increased in width.

After the commencement of the rainy season (which period varies in different parts, from the middle, to the end of June) tempestuous weather must be occasionally expected. Places of shelter are more

common at this season, than at any other, by the filling of the creeks and inlets, as the river increases: and, on the other hand, the bad weather, when it happens, is of longer continuance than during the season of the northwesters. The rivers being now spread to the breadth of several miles, a strong wind has the power of raising large waves on them, and particularly when blowing in a contrary direction to the rapid parts of the stream; which at such times should be avoided, as much from motives of conveniency, as of safety.

During the long interval between the end of the rainy season, and the beginning of the northwesters, one proceeds in security with respect to weather, and has only to observe a common degree of attention to the piloting the boat clear of shallows, and stumps of trees. These will generally be avoided by keeping nearest to the side that has the steep bank; but not so near, as to be within the verge of its inferior slope. This steep bank (see page 341) has the deepest water, and the strongest current near it; and is therefore, on both accounts, the proper side to keep on, when going down with the stream; as its rate of motion must principally determine that of the boat; for the motion acquired by the oars of a large *budgerow* * hardly exceeds 8 miles a day, at ordinary times.

From the beginning of November to the middle or latter end of May, the usual rate of going *with* the stream, is forty miles in a day of 12 hours; and during the rest of the year, from 50 to 70 miles. the current is strongest while the waters of the inundation are draining off; which happens in part of August and September.

In many of the shallow rivers, the current is exceedingly slow during the dry months; insomuch, that the track-rope is frequently used, in going downwards.

* A travelling boat, constructed somewhat like a pleasure-barge. Some have cabins 14 feet wide, and proportionably long; and draw from 4 to 5 feet water.

In towing *against* the stream, the steep side is also generally preferred, on account of the depth of water; although the current runs so much stronger there, than on the opposite side. On these occasions, one ought to be provided with a very long track-rope, as well to avoid the falling pieces of the steep bank on the one side, as the shallow water on the other; when it becomes necefsary to change sides, through the badnefs of the tracking-ground. The anchor should always be kept ready for dropping, in case the track-rope breaks.

Seventeen, to twenty miles a day, according to the ground, and the number of impediments, is the greatest distance that a large budgerow can be towed against the stream, during the fair season; and to accomplish this, the boat must be drawn at the rate of four miles and a half *per* hour, through the water, for 12 hours. When the waters are high, a greater progrefs will be made, notwithstanding the increased velocity of the current; because the filling of the river-bed gives many opportunities of cutting off angles and turnings; and sometimes even large windings, by going through creeks. And as the wind at this season, blows upwards in most of the rivers, opportunities of using the sail, frequently occur.

In the very singular navigation acrofs the *Jeels*, or inundation, between Dacca and Nattore, &c. in which 100 miles or more, are sailed on nearly a straight course, leaving the villages and groves to the right and left; little difficulty occurs, unlefs the wind should fail: for while it continues to blow, it is always fair, during the season of the inundation. The current presents only a trifling obstacle; since its motion (which is nearly parallel to the course of the Ganges) is seldom half a mile per hour.

The season of the *northwesters*, is, above all others, that which requires the most attention and care. Should one of those squalls approach, and no creek or inlet offer for shelter, when in the wide rivers; the steep bank, if not in a *crumbling** state, should always be

* See page 341, and the second note in the same page.

preferred to the flat one, whether it lie to windward or leeward. If the bank be in a crumbling state, a retreat to a firm part of it (which is most likely to be found in the straightest parts of the river) should be attempted. But if this cannot be done, the flat side must be taken up with; and if it be a *lee-shore*, the anchor should be thrown out to prevent driving on it. In these cases the mast is always supposed to be struck; and provided this be done, and the cargo judiciously disposed, it is probable that a well-constructed budgerow will be in no danger of oversetting by the mere force of the wind alone: although by an unfortunate, or an ill-chosen situation, it may be so much exposed to the waves, as to be filled and sunk by them. At this season, every traveller should be particularly attentive to the nature of the river-bank, as well as to the appearance of the horizon, during the last hours of the afternoon; and if he finds a place of shelter, he should stop for the night: and not hesitate about losing time, which may be retrieved the next morning, by setting out so much earlier. The boatmen work with much more alacrity on this plan; because they have day-light before them to secure their boat, provide fuel, and dreſs and eat their provisions.

As the water is always either rising or falling within the beds of the rivers, it is impoſsible for a map to aſsign precisely where a place of shelter shall be found, at any given time. Thus much, however, may be concluded, that in a place where the junction of two considerable channels is effected when the rivers are up, there will be an inlet, or deep bay, throughout the dry season, although one of the channels should be dried up. The waters (as we have said before) are rising from the latter end of April, to the middle of August: and falling during the rest of the year.

The navigation through THE WOODS, or SUNDERBUNDS, is effected chiefly by means of the tide. In the large rivers, or those which communicate immediately with the sea, the circumstances of the tide are more analogous to the ordinary course of it, than in the

small lateral channels which serve to connect the great rivers together. Thus, in two rivers of equal bed, and parallel course, the tide will at any time flow in the same direction, in both: but if they happen to be united by a lateral or crofs canal, the flood tide will enter that opening of the canal which lies nearest to the sea, and run through it into the other river; and the ebb tide *vice versa*. But as the arrival of the tide depends on the capacity and formation of the rivers, as well as on the absolute distance it has to run; it will not be an easy matter to determine its direction at any given time, even with the help of a map.

There are two distinct paſsages through the Sunderbunds, the one named the southern, or SUNDERBUND PASSAGE, the other the BALIAGOT PASSAGE. The first is the farthest about, and leads through the deepest and widest rivers; and is of course, the most exposed during tempestuous weather. It opens into the Calcutta river, through Channel-creek*, about 65 miles below the town. The Baliagot paſsage opens into a lake on the east side of Calcutta; from whence, within a very few years, a small canal has been cut, to join the lake with the river.

These paſsages present to the imagination, both a grand and a curious spectacle: a navigation of more than 200 miles through a forest, divided into numberleſs islands by a continued labyrinth of channels, so various in point of width, that a veſsel has at one time her masts almost entangled in the trees: and at another, sails uninterruptedly on a capacious river, beautifully skirted with woods, and affording a vista of many miles each way. The water is every where salt; and the whole extent of the forest abandoned to wild beasts: so that the shore is seldom visited but in cases of neceſsity; except by the wood-cutters and salt-makers; whose "dreadful "trade" is exercised at the constant peril of their lives: for the tygers not only appear on the margin in quest of prey, but often, in the

* A part of this creek forms the place known of late by the name of NEW HARBOUR.

night time, swim to the boats that lie at anchor in the middle of the river.

These paſsages are used during the whole year, by those who go to and from, the lower parts of the Ganges, and Calcutta, &c. and during the season when the western branch of the Ganges is almost dried up, the whole trade of Bengal (the western provinces excepted) paſses either by Channel-creek, or Baliagot, but chiefly by the former; some articles of the Company's cargoes being brought more than 900 miles by water, at this season.

EXPLANATION OF PLATE, N° I.

A. A. A. Steep banks, corroded by the current; the fragments of which are deposited, and form the banks B. B. B.

C. A sand-bank, accumulating to an island. This once joined to D; till insulated by a breach of the river.

E. An island formed and inhabited. This also was a sand-bank, thrown up round the point F.

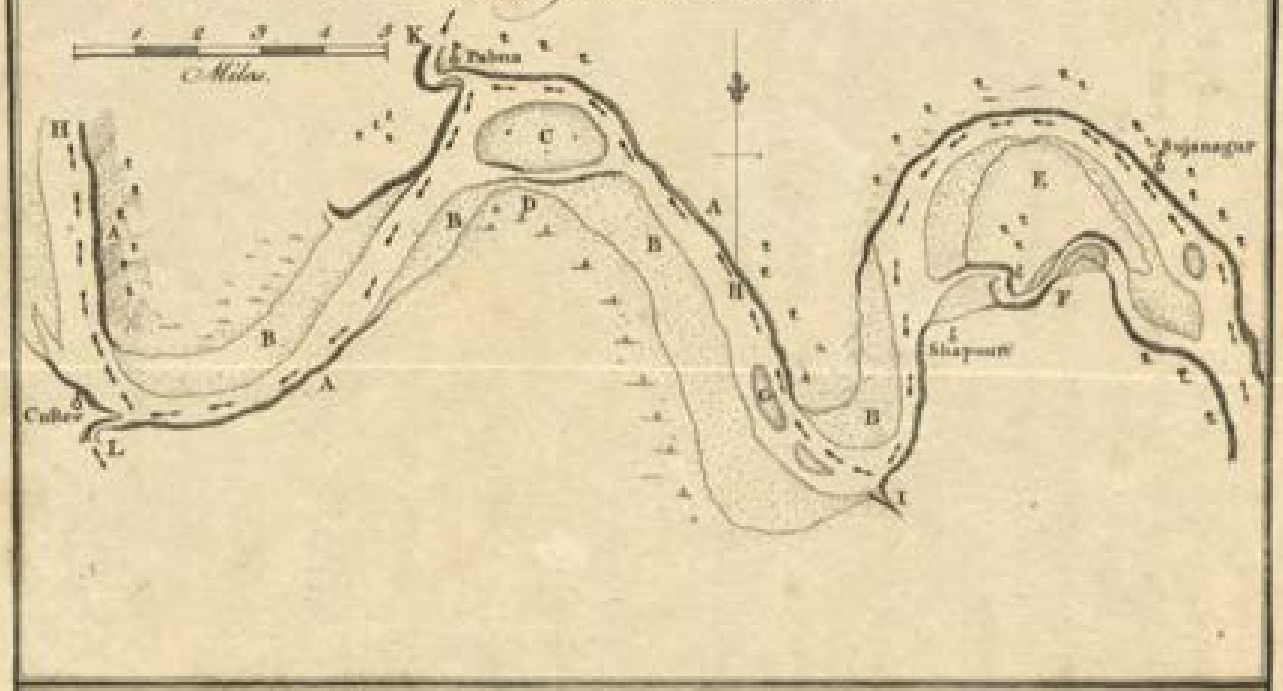
G. An island accumulating in the midst of the channel.

H. The line of the strongest current.

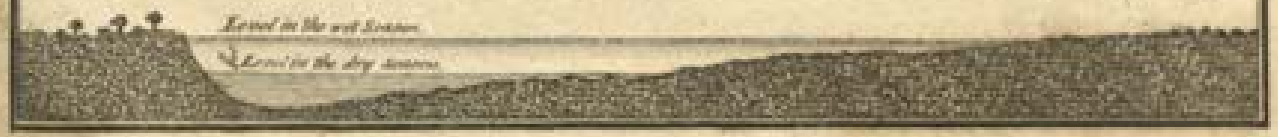
I. A gulf occasioned by the force of the current, from the opposite side, striking against the bank: the origin of a future branch iſsuing from the great river. In a course of time, the first reach of it becomes retrograde to the course of the river (see note, page 343) as at K and L.

N. B. The section of the branch of the Ganges is exactly similar to that of the Ganges itself, except in the article of width.

PLAN of part of the Course of the GANGES, to explain the nature of the steep and shelving Banks, Islands &c.



SECTION of a Branch of the GANGES, as a further explanation of the steep and shelving Banks.



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MAP of the Dublin Navigation.

ADDENDA.

I. FATE *of the* GREAT MOGUL: *and the Progrefs of* MADAJEE SINDIA.

[*Refers to pages* lxxxvii, *and* cxxviii, *of the Introduction.*]

AFTER the first edition of the Memoir was printed, and before it was published (in 1788), accounts from India informed us, that Sindia had been defeated by the confederated Rajpoots, on the side of Jyenagur and Joodypour: and that in consequence, he had retreated southward to Gwalior. They added, moreover, that the nominal Mogul, Shah Aulum, had taken the opportunity of escaping from Sindia's camp, to the Rohilla chief of Sehaurunpour.

In the course of the following year, the horrid transaction of putting out the eyes of the unfortunate Mogul, was perpetrated by the same Rohilla chief, Golam Cawdir (see Introd. p. cxxi.), who took poſſeſſion of Delhi, and of the Mogul's treasures. Some have attributed this cruelty, to disappointed avarice: but it appears that Golam Cawdir took poſſeſſion of ALL the treasures; and that the sum of them was fully equal to his expectations. His brutal and insolent conduct towards his aged captive, was more probably in revenge of real, or supposed injuries. He very soon after, suffered an excruciating death from the hands of Madajee Sindia; who again pursued his schemes of conquest on the side of Rajpootana, with various succeſs: although his arms were, on the whole, triumphant.

By the latest advices from India, matters appear to be far from settled, in the north-west of Hindoostan; where the growing

power of the SEIKS, threatens the peace, if not the security, of their southern and eastern neighbours. [See pages cxxi, and cxxii, of the Introduction.]

II. CORRECTION *of the* COAST *of* ORISSA, *in the* MAP *of* HINDOOSTAN.

[*Refers to page* 11.]

THE arrival of Capt. Ritchie in England, enabled me to correct that part of the coast, between the mouth of the Kannaka river (on the north of Point Palmiras), and the most southern branch of the Mahanuddy, or Cattack river; from a tracing of that coast, made by Capt. Ritchie, by order of Mr. Hastings. From this chart it appears, that Point Palmiras is further to the eastward, in respect of Jagarnaut and Balasore, than is warranted by the materials, discufsed in page 11: for by the late observations, it ought to be placed (at least) in 87° 5′ longitude, instead of 87° 1′ 30″. A reference to the map will best explain the respective positions of the principal mouths of the Mahanuddy, and other rivers, between the black pagoda and Kannaka. It is proper to observe, that the coast was not traced home to the black pagoda; so that the *exact* position of Point Palmiras, is yet a *desideratum*. Capt. Ritchie was informed, when at the southmost opening of the Mahanuddy, that the black pagoda, was very near, on the south-west. It was, however, out of sight; but this may be accounted for, by the form of the coast, which projects in a very large curve, and might intercept the view of the pagoda, from a person close under the shore, as Mr. Ritchie was: although the pagoda might not be many miles off. The southmost mouth or opening of the Mahanuddy is in lat. 19° 54′: and is supposed to be about 19 miles to the eastward of Jagarnaut pagoda. The object of this examination, was, to enable the Government of Bengal, to fix on a

proper spot for a light-house, for the direction of ships round Point Palmiras, and into Balasore road. Capt. Ritchie gave the preference to the point itself (named Mayaparah by the natives), but no light-house is yet erected. I believe the matter rested with the merchants of Calcutta. The reef extends near 10 miles to the E N E of Point Palmiras, in the new chart. There was too much surf on the coast to allow his boat to land, so that he could not learn the names of the few villages that are dispersed along the coast. He is pretty certain that no large river falls in between Point Palmiras and the false point.

III. TRADITION *concerning* ALEXANDER'S *crofsing the* INDUS, *in the Country of* SINDY.

[*After page* 131.]

THERE is, according to the report of the gentleman, mentioned in page 177, a tradition amongst the people of Sindy, concerning the place where Alexander crofsed the Indus, on his return to Persia. They refer this crofsing-place, to a point, considerably higher up than Tatta. It has been stated in the note, page 179, that TATTA stands in the inferior delta; but if the tradition may be depended on, as to particulars, it is probable that PATTALA stood in the superior delta.

It is worthy of remark, that in the map of Persia, mentioned in page 225, a town of the name of *Eraba*, stands on the eastern bank of the river that answers to the *Arabius* of Alexander and Nearchus.

IV. *Concerning the Position of* SIRINAGUR, *and the upper Part of the Course of the* GANGES.

[*Refers to page* 227, et seq.]

I FIND that I was misled, by the map of the Ganges, made from the materials furnished by the late M. Tiefentaller; having, on the authority of that map, placed the town of Sirinagur (the capital of a district of the same name) on the *north* of Hurdwar: whereas, it appears by the observations of some English gentlemen, who visited Sirinagur in 1789, to lie nearly to the E N E of Hurdwar. It is a very extraordinary mistake; and ought to render us cautious in receiving other reports (of bearings, at least), from the same authority.

The position of Sirinagur is at present established, in the additional map (at page *65*), on the authority of Capt. John Guthrie, who visited it in 1789: and who says, that "it is 85 miles from "Coadwar Gaut, through the hills: and 60 cofses from Hurdwar, "up the Ganges, to the E N E: ascertained by a compafs and "perambulator." (*Road* miles are no doubt intended.) I am indebted to Col. Mark Wood, chief engineer of Fort William, Bengal, for this obliging communication.

Mr. Daniel, with a party also visited Sirinagur, the same year: and he gives nearly the same idea of its geographical position. It is situated in an exceeding deep, and very narrow valley; formed by mount Sewalick,* the northern boundary of Hindoostan, on the one side; and the vast ridge of snowy mountains of HIMMALEH, or IMAUS, on the other: and from the report of the natives, it would appear, that the nearest part of the base of the latter (on which snow was actually falling, in the month of May), was not

* *Sew-lick* is the term, according to the common acceptation; but Capt. Kirkpatrick proves, from the evident etymology of it, that it should be *Sewa-luck*.

more than 14 or 15 G. miles in direct distance, to the N, or N E of Sirinagur town.

In crofsing the mountains of Sewalick, they met with the vegetable productions, proper to the temperate climates; and the thermometer stood at 58¼°: but in descending into the lower part of the valley of Sirinagur (although, as we have just said, the north side of it, is bordered by snowy mountains), the thermometer rose to 100°, in the shade: which was 2° higher than at the place where they first began to ascend, from the plains of Hindoostan.

Mr. Daniel was greatly struck with the magnificence of the scenery, during this short excursion; particularly in the valley of Sirinagur itself, on one side of which, the base of the snowy ridge may be said to commence: and the entire face of the mountain, from the base to the summit, meeting the eye at once, exhibits a boldnefs of front, and vastnefs of elevation, that is seldom equalled in one and the same point of view.

Some geographical information concerning the upper part of the course of the Ganges, and its principal branches, appears at the foot of a very characteristic, and beautiful sketch, of the two great chains of mountains; drawn by Mr. Daniel, and transmitted to this country; and communicated to me, by my friend Sir Joseph Banks. This information is contained in three geographical sketches, explained in some letters that accompany them. Two of these sketches are Mr. Daniel's original ones; and as far as they go, exhibit that firm attachment to truth, and *honesty* of discrimination, which I have observed in all the works of this ingenious artist: for he has made two distinct sketches, of what he *saw*, and of what he *only heard of*. The third sketch is called "Mr. Daniel's sketch "corrected:" and differs in one remarkable particular, from the original one; in that the Alucknundra river, which paſses under Sirinagur, is made perfectly distinct from the Baghyretty: but Mr. Daniel's sketch describes the Alucknundra, as a branch of the Baghyretty, which separates from it, below the *cow's mouth*, and

rejoins it below Sirinagur. I know not to whom I am to attribute this " corrected sketch;" but some of the information *written* under it, differs from that contained in Mr. Daniel's letters.

Although the geographical information furnished by this tour, is not of a kind, perfect or circumstantial enough, to allow of its being inserted in the great map: yet, on the whole, afsisted by our previous, though very limited, knowledge of the subject, we may draw from it, the following conclusions:

1st. That the Baghyretty (which I take to be the true head of the Ganges) and Alucknundra rivers, the former from the N, and the latter from the N E; join their streams at Deuprag, or the *middle* Gangoutra,* at a few miles distance below Sirinagur; and then form the *proper* Ganges of Hindoostan; which afterwards ifsues through mount Sewalick, at Hurdwar, the *lower* Gangoutra.

2d. That Sirinagur is situated on the Alucknundra, reckoned the largest of the two streams: and being there confined within a channel of 100 yards wide, runs with astonishing rapidity, and is crofsed by means of rope bridges, of a peculiar construction.

3d. That the Alucknundra river (or at least the eastern branch of it) has its source in the snowy mountains of Thibet; and is traceable to Buddlenaut, or Badrenaut, nine journies above Sirinagur. The road being exceedingly difficult, great deductions must of course be made, in reducing the distance to a straight line. By the map, at page 200, it seems probable, that the Alucknundra is the same river that appears in Du Halde (Vol. IV.), under the name of *Manchou*; whose source is not far from that of the Ganges; and which it joins before that river ifsues from mount Sewalick.

4th. That the Baghyretty river, has a source far more remote than the Alucknundra: but through defect of information, the direction of its course above the *upper* Gangoutra, is unknown. The account in the corrected sketch, says, that one branch of it

* This is a compound term, signifying the *fall* or *cascade* of the *Ganga*, or Ganges.

comes from the lake *Dhul* above Cashmere: but this lake, as is well known, having no outlet *on the east*, from the valley of Cashmere; any branch of the Ganges that comes from the north-west, must of course, spring from the mountains that lie on the east of Cashmere. As to the head of the Ganges itself, we cannot forget the particulars, communicated by the Lamas, sent by CAMHI; whose report, although defective in geometrical exactneſs, has not fallen under any suspicions of error, or misrepresentation, in plain matters of fact: and their report was, that the Ganges iſsues from the lake Mapana, and runs westward; afterwards turning to the south, and south-east. The meſsenger sent by Tiefentaller, appears to have corroborated this report; though without intending it. [See pages 309 and 310 of the Memoir.]

The distance of the cavern, named the *cow's mouth*, is not written on Mr. Daniel's sketch; but may be inferred by the proportional spaces, to be somewhat nearer to Sirinagur, than Badrenaut is. It is described to be above the *upper* Gangoutra (though I had supposed it to be one and the same place), and this last, is about 150 G. miles from Sirinagur, by Tiefentaller's account: and as this gentleman's report of the *distance* between Hurdwar and Sirinagur agrees with the late accounts; that between Sirinagur and Gangoutra (as he also travelled it himself) may, I think, be admitted in the present case.

Upon the whole, we have made no advances, in the present instance, towards ascertaining the upper part of the course of the Ganges; or that between its source and the cow's mouth; which latter, we may conceive, from the accounts before us, to be situated in a north, or N by W direction from Hurdwar. Between those points, the Ganges may be supposed to take a deep bend; though perhaps not quite so deep as the Lamas' map describes it.

Mr. Daniel was informed (as we have before hinted), that the Baghyretty river, at a considerable distance below the cow's mouth, that is four journies, separates into two branches; the easternmost

of which is said to be the Alucknundra. It is however, so unusual a circumstance, in a rugged and mountainous country, for a river to separate into different branches; and these to unite again, at the distance of several days' journey, lower down; that it requires a more decisive kind of evidence, than the vague report of travellers; given perhaps, in a language not critically understood by the persons who received it. Concerning this, and other particulars, the very active and spirited inquiries, now pursued by our countrymen in India, may speedily furnish us with very satisfactory information.

My worthy friend, Col. Robert Kyd, of the Bengal establishment, whose active and philanthropic mind, directs every discovery, and every incident, towards the benefit of his fellow creatures; observes, on occasion of his communicating the narrative of Mr. Daniel's journey, to the Government of Bengal, "that the facility of "communication with this Alpine region, enables those, whose "ill health might otherwise compel them to revisit their native "country, subject to the annoyance of breathing the unwholesome "air of a ship, for several months; to effect a change of climate "from that of the burning plains of Hindoostan, to the cold of "Greenland (if required), in 48 hours; or to any of the inter-"mediate temperatures, between those extremes: accompanied "also with the no lefs desirable change of vegetable diet. To those "European constitutions that have been relaxed, by long residence, "in the lower regions of Bengal, the Rungpour frontier offers a "similar resource; and is still nearer at hand."

END OF THE MEMOIR.

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TO THE

MEMOIR.

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*** The Names of Countries, or Nations, are in Roman Capitals; and the Names, or Titles of Princes, Rajahs, or Chiefs, in Italic ones. The Titles of Books, and the Names of Authors, as well as of other Persons whose Authorities are quoted, or whose Assistance has been acknowledged in the Course of the Work, are in Italics: and the Names of Places belonging to Ancient Geography, have an * prefixed to them. The Roman Figures, refer to the Introduction; and the Arabic ones, to the Memoir, and Appendix.

†‡† Abbreviations.—Terrs. Territories. I. Island. R. River. Pt. Point. Mt. or Mt^{s} Mountain, or Mountains. Prov. Province.

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TO THE

GENERAL MAP.

☞ The whole Map being divided into Squares, or Spaces, by the Intersections of the Parallels of Latitude with the Meridians, each particular Square is pointed out by Letters of Reference, alphabetically arranged along the Margins of the Map; the side Margins having capital Letters, and the top and bottom ones small Letters. For instance, the City of DELHI is given in the Index under the Letters E o: and if the eye be guided along horizontally in the Map, from E, until it comes under o, the Square which contains DELHI will be found.

*** The Names of Countries, or Nations, are in Roman Capitals; and those of Princes, Rajahs, or Chiefs, in Italic Capitals: and such Places as have their Situations described in the Index only, and not in the Map (owing to want of room), are in Italics. Others have only a Part of their Names written in the Map: and the Part wanting, is also distinguished by Italics in this Index. The Places without Names, in the Map, are left, in expectation of being able to supply the Names, hereafter.

††† Abbreviations.—Terrs. Territories. I. Island. R. River. Pt. Point. Mt. or Mts. Mountain, or Mountains. F. Fort. G. Gaut, or Pass. S. Serai.

A.

ABDALLI - B d
Abdoolgunge - H u
Abhoogur - A n
Abugur - H l
——— hills - *ib.*
Acharpour - G r
Acharpour - G t
Acaguiry - S n
Accoury - I t
Acheen - *D b*
Acory - H q
Acra - R r
Adalamgur - F p
Adam's bridge - Z q
——— peak - *B r*
Adaveed - S p
Adaumpour - L *a*
Aderampar - Z n
Adeypour - F n
Adgigunge - G r
Adiqur - Q o
Adii R. - I v
ADJIDSING, Terrs. of I s
Adjuatee - N n
Admuncotta - X p
Adoni - S o
Adriampatam - Y q
AFGHANS. The people inhabiting part of Cabul and Candahar.
Afzulgur - D p
Aganis - *C t*
Agaron - X q
Agercite - *A n*
AGIMERE - G m
Agimere - *ib.*
Agger - Q m

Agoree - I u
Agrarum - R s
AGRA - G p
Agra - F p
Aguada F. - S k
Aguarca - F w
Ahar - H p
Ahgadeep - K *a*
Ahrireah - G z
Ajigur - H r
Ajitmol - G q
Ajatnagur - O o
Akoat - M o
Akowlah - N o
Alaberti - E o
Alagore - W o
Alada Is. - Z *k*
Alembaddy - W o
Alene - Q n
Alicant - *C* q
Aliapetta - X p
Aliga R. - S l
Alinagore - X q
Alivarcourchy - *A* o
Alki - R l
Allapour - F q
ALLAHABAD - H t
Allahabad - *ib.*
Allapour - E q
Allinagore - F o
Alluknundara R. - B p
Allumparvé - W r
Allinghy - Y o
Alligunge - F q
Alligunge - E q
Alligunge - G u
Allingherry - W p
Alloor - T r
Allore - N o
Allung-Cullung - O k
Allumpour - L y
Allumchund - H s
Allum - *A* o
Allinagaram - Z o
Allypour - G o
Almada - R n
Almanchery - U q
Almunda - Q u
ALMORAH - D q
Alore - P p
Alpour - R o
Alva - Y n
Alvar - F o
Alwara - G p
Alyncohan - L l
Alorno - S k
Amarautpour - F q
Amadabaz - P l
Amarchitta - R o

Amapet - Y p
Amachetrum - Y p
Amasatrum - Z q
Amanu - F x
Amaroad - I x
Amagur - M r
Ambigaum - N k
Ambeer - F m
Amba - G p
Amba - O n
Ambarry - K o
Ambarpet - Q p
Ambeli - W m
Amboor - W p
Ambala - Y n
Ambooah - *K a*
Ambawee - K k
Amedabad - K i
AMEDNAGUR, the same as Dowlatabad.
Amednagur - O l
Amedpour - O y
Amerpour - G y
Ameapah - Y q
Amgong - P o
Aminagur - L y
Aminaig*pollam* - Y o
Amitty - G s
Amingunge - G t
Amittur - *ib.*
Aminta - R k
Amjerra - L m
Amlah - P l
Ammercot - H g
Ammul - Y o
Amoulee - G r
Amood - L i
Amoary - O m
Amren - L f
Amroah - E p
Amrely - M g
Amrun - M h
Amrautty. See Omrautty.
Amrutsur. The same with Chuckgouroo.
Anantasagarum - P q
Anantoor - W p
Ananpour M k, and U m
Anantpour - T o
Anantpour - T p
Anamsagur - R n
Anantasapilly - Q s
Anarodgurra - *A* r
Ancola - O k
Ancry - O q
Anchitty - W o
Andeah - K p
Andicotta - Y n
Andaman I. Great W *e*

Andaman I. Little Y *e*
Andanagur. See Amednagur.
Andra-Jerba - K x
Aneeour - Z o
Angamally - Y n
Angantole - *C* r
Angola - R o
Angulty-Bednore - U o
Angarum - X o
Angara - B s
Angoutchu - B s
Angla - L i
Angedive Is. - T k
Angriah's F. See Gheriah.
Anicul - W o
Anjaneer - O k
Anjar - L f
Anjenga - *A* n
Ankapilly - Q u
Ankapilly - Q s
Anmantagoody - Z p
Annamally - Y o
Anopesheer - E p
Anpour - M n
Anrodgurry - X p
Antigareeah - Q i
Anterly - M n
Antongory - O p
Anundpour - L g
Aptha - P i
Appoo R. - R *i*
Appole - H *b*
Aquail - L *f*
* Arabius R. - H b
Aramroy - L e
Arawill - M m
Arakeery - W n
ARCACAN - M *f*
Aracan - N *e*
ARCOT, NABOB of, his Terrs. See CARNATIC.
Arcot - W q
Archachera - Q i
Ardjolee - K s
Ardingay - Y q
Ardjogay - S q
Ardenelle - X n
Areg, or Arruck - R l
Argnelore - X p
Arisala - U p
Aripo - *A* q
Arielore - X q
Aridrong - *C* w
Arinkill. See Warangole.
Arki - Q o
Arlier - W o
Armegon - T r
Arnee - W q

Arnee - U r
Arnaul I. - O i
Aronee - H p
AROKHAGE - B d
Arpur - E x
Arr - O k
Arrivacourchy - Y o
Arrah - H w
Arrah - H a
Arruck, or Areg - R l
Arseewa - L u
Artingury - Z q
Arucotarara - X n
Arval - H w
Arzingur - N i
Aseergur - M n
Ashta - K n
Aska - O w
Aslana - K q
Asnah - I z
Asnaha - L y
Asneah - I z
Asnabad - P n
ASSAM - G *e*
Afiarpour - K e
Afsawully - I l
Afsewan - G r
Afseet - F q
Afsid - E p
Afsory - G q
Afsorrick - A n
Asta - Q l
Astee - M p
Astee - O n
Afsuery - I x
Ataroly - F p
Atcherawauk - W q
Atchencoil - Z o
Atenegal - *B* r
Athikeera - I p
Atipalli - W o
Atoni. See Huttany.
Atquar - R q
Attacoor - T q
Atter - G p
Attong - M h
Attore - X p
Attoor - Y o
Attegode - *B* r
Attyah - I *b*
AVA, dominions of N *i*
Ava city - M *k*
—— river - N *i*
—— coast - Q *g*
Avaro - S k
Avelim - S k
Avin - X o
Aumore - H z
Aulapaladurg - U p

Aurung - M t
Aurungabad (in the Deccan) O m
Aurungpour - I d
Aurungabunder river K d
Aurungabunder I d
Arumoor - P p
Aury - F s
Auspoor - K l
Autarrah - H r
Autteriah - L s
Awmore - I z
Awatty - P m
Ayawaroo - T q
Aycotta - Y m
Ayempet - Y q
Ayturah - K z
Azimgur - G u
Azimpour - *ib.*
Azimnagur - L *a*
Azmerigunge - I *d*
AZUPH VOWLAH. See OUDE.
Azmutgunge - I w

B.

Baate - I *f*
Babelga - P p
Babgaum - P l
Babra - L g
Backergunge - L *c*
Bacecotty - B o
Baccanore - U l
Badrowly - M *k*
Badgum - P o
Badrachillum - Q *s*
Baderally - R l
Baddamgur. See Bandemgur.
Baddammy - R m
Badenahally - W n
Badule - *B s*
Badody - E o
Badergur - *ib.*
Badshawpour - H t
Baderpour - G p
Baggor - I x
Bagoncotty - A u
Bagru - G n
Bagusro - M g
Bagupour - M k
BAGLANA - O k
Bagone - P o
Bahbelgong - O l
Bahoor - X q
Bahatracally - Z n
Bahraitch - P s
Bahasawanny - H k

Bah - G p
BAHAR - H x
Bahar - *ib.*
Baigumgunge G s
Bain river - O s
Bajapour - O m
Bajetpour K s and L *a*
Balaapatnam - W m
Baloygunge - L r
Balode - M m
Balhary - T n
Balelcroydroog W n
Ballapour - N o
Ballapatty - U q
Ballirangaut - Y m
Ballavur - P l
BALLOGES D b
BALLOGISTAN, Little, E n
Balamgur - E o
Balsora - R s
Balapour - F s
Balowry - G o
Balpuda - H y
Balkifsen - K *a*
Ballitungby - K *a*
Balongo Is. - O e
Balbadder - M y
Balasore - *ib.*
Balluntee - N p
Balurpour - O q
Balgaon - O o
Balegum - *ib.*
Balaconda - P p
Baloly - *ib.*
Balkee - Q o
Bamingola - H *a*
Baminy - L c
Bancaneer - L l
Bancout - P i
Bancapour-Sanore S m
Band - R o
Bandarmalanka R t
Bandem - S k
Bandemgur - R n
Bandcrpol - M y
Bandoogur - *K s*
Bangalore - U o
Bangarim - *A l*
Bangah - I e
Bungur. This fortreſs was situated between Owlah and Bereilly - E q
Ban R. - F n
Bandeer - H q
Bandersandry - G m
Bangermow - G r
Bankypour - U m
Banjary - K r

Banswarah K l and F p
Bansdah N k
Banskara F r
Bansey F u
Banwar L f
Bantwa M f
Banybumra M x
Bapatla S r
Bar H x
Baroda N q
Barota K n
Baraset L *a*
Barapulla E o
Bartapour E s
Baroud F m
Barodeana F n
Baronda G l
Bardia X l
Baree G p
Barelly G s
Bardiano I f
Barilla K r
Bareala L r
Baroach M i
Bargong M n
Baroogong N n
Bari R l
Barrasur K w
Barrapalong M *e*
Barra N x
Barra H r
Barrihua G x
Barcelore U l
Barriconda W p
Barramaul. The valley of Vaniambaddy.
Barreah L k
Barcalore Y n
Bareatty Z n
Barbarein I. *C* q
Barlepanetote *C* r
Barren I. W *g*
Barago R S *b*
Baroual P w
Barenda I x
Bafsambe A n
Bafsf Rajpoot B o
Bafsa Byraghy *ib.*
Basain G n
Basbagee G m
Basra L k
Bafseen O i
Bafsas, Great *C* s
——— Little *C* t
Bafsur G x
Batgao E x
Batcole U l
Batacola *B* t
Battle*gunta* Y o
Bate L e
Baurotty B n
Baugpour D p
Baurgaut *ib.*
Baurey F s
Baum N q
Bauglore W o
Baunasoor O x
Baumingot L y
Baugnan L x
Bautconda L y
Bauleah I *a*
Baudshapour H u
Baypour X m
Bawnagur O x
Bazar M q
Beermah K w
Bechia K o
Bechnah L s
Beddapollam U p
Beddigam *C* s
Beder Q p
BEDNORE T l
Bednore U l
Bedramangoody U n
Beed L f
Beedagur K r
Beegygur I u
Beegygur H p
Becjypour H s
Beehpour F t
Beelmal I k
Beemah R. Q m
Beerah L w
Beercool M z
Beersingpour G t
Beesnah H p
Behara M k
Behat B h
Bekher F g
Behta O i
Behut G p
Behut H p
Bejurah I d
Beilsingur L x
Beiragur N u
Belalgur N i
Belaspour I. u
Belcofs H s
Belcuchy I *b*
Beldeah I y
Bella G r
Belgar H r
Belgram F r
Belharee K r
Bellepahary L y
Belliah H y
Belluah I *b*
Belki M *n*
Belore P p
Belouda L t
Belowry G y
Belsund G x
Beltangady W m
BEMBAJEE, Terrs. of M t
Bemaveram U q
Benaveram U n
BENARES H u
Benares *ib.*
Bendah H r
Bendallah O m
Bendelly *C* s
Benasa A r
Bendrabad F p
BENGAL K *a*
Beniagunge G s
Bennyke G u
Bentot *C* q
Berapour R l
BERAR N q
Bereilly E q
Beridge L i
Berie R l
Bermah K *b*
Bermya I *c*
Bernaba D o
Bernagur I *a*
Berowly H w
Berowly R l
Bersana F o
Beschpour G k
Besudagunge K p
Betah L z
Beteru H u
Betoor G r
Betta*mungulum* W p
Bettyah G w
Betwha R. H q
Beurah L w
Bezoara R r
Bhagalcotta R m
Bhaiawar L f
Bhakor F g
Bhartpour F o
Bhatter L g
Bherwa I l
Bhorakeerah K n
Bhotul M p
Bhouseree Q o
Bhuder M f
Biana G o
Bibhee L r
Bicangong L m
Bicholim S k
Bicciacor F x
Bickaneer F k
Biddanore. See Bednore.

Bidgerawn - I *o*
Bidifsur - N x
Bidzigur, or Beejygur I u
Bigoneah - M y
Bikkur - H p
Bilesur - Q k
Bilgilly - R m
Bilghey - T l
Bilgum - P u
Bilgam - *C* r
Bilitot - *C* q
Billaigur - M u
Billipour - O i
Bilsah - K o
Bimtepatam - Q u
Bimnaut - L h
Bimped - F x
Bimsing - P u
Bimulwilsa - Q u
Binde - G q
Bindi - P w
Bindkee - G r
Binko - N u
Birboom - K z
Birchee - M l
Birikingam - O m
Birkoory - I z
Biruckpour - I q
Bisantagan - L h
Bisnagar - S m
Bisnee - G c
Bifary - I r
Bifco - L i
Bifsoah - F s
Bifsore - M y
Bifsowlah - E q
Bifsunpour - K z
Bifsuntpour - H z
Bifsypour - G y
Bittounjah - I u
Black Pagoda - O y
Boad - N w
Boansa - O n
Bobilee - P u
Bocar - O m
Boden - P p
Bogga - F w
—— Chuta - G w
Boglipour - H z
BOGGILCUND - I s
Bogmutly R. - H y
Bogru - G r
Bojepour - N u
Bokinagur - I *c*
Bokira - M f
Bolee - I p
Bola - K n
Bolaut - K o
Bolia R. - Q *i*
Bolloda - K i
Bombally (Santa) P w
Bombay - P i
Bomel - O p
Bominy - L *d*
Bomman - M f
Bomrauzepollam - U q
Bonafyl - I *e*
Bondah - H r
Bongama - G y
Bongary - X q
Bonneguir - Q q
Bonsola. The district bordering on the north of Goa - S k
Bontaldim - T p
Boodighery - U o
Boodicotta - W p
Boodgeboodge - K f
Boolbarya - I *b*
Boolecoote - N l
Boondy - H n
Boorah - F q
Boorset - L i
Booradung - H o
Boosnah - K *b*
Boosangur - Q l
BOOTAN - F *a*
Bootee - N m
Bootgong - M u
Boothypour - E r
Bopaltol - K o
Bopara - O k
Borah - K o
Bore - P l
Borea - I p
Boriah - L s
Boresail I. - I s
Borrow - G q
Borrudgow - P m
Bory - N i
Bosotandy - H *c*
Boudelore - Y q
Boudgong - I x
Boudhan - M k
Bovincoral - X o
Boujepour - H w
Bouakee - L x
Bourasinghy - P w
Bourgni - P p
Bowah - F w
Bowanigunge - I *a*
Bowanigunge - G *b*
Bowanipour - H z
Bowapeer - M k
Bowat - *B* r
Bow Chagong - Q h
Bower - D p
Bowly - N q
Bowmore - H p
Bowr - G y
Bowrafsa - I p
Bowri - I y
Boxah - E q
Boykunpour - G *a*
Boysee - N q
Bozingur - W p
Braminabad - I d
Bramnee R. - M x
Brinja - N k
Brinjaun - *A* n
BRITISH POSSESSIONS in Bengal - I y
—— Circars - P u
—— Carnatic - U r
—— Malabar coast O i
Brodera - I k
Brodra - H n
Brokry - M n
Bruxe I. - R *k*
Bucclorserai - G q
Buckrah - G u
Buckrah - G x
Budawur - K m
Budayoon - E q
Buddakano - I q
Buddaruck - M y
Buddenpour - I s
Budderwas - H o
Buddulgunge - H *b*
Buddaul - H *a*
Budegovia - S o
Budgebudge - L *a*
Budiad - L h
Budneera - M n
Budzaw - K f
Buffaloe Rocks - R *g*
Buggoorah - I *b*
Buggulgow - N m
Bujana - L h
Bukorah - K h
Bullater - G u
Bullauda - L t
Bullepalle - S p
Bulloah - L *c*
Bulluah - G w
Bulluary - I u
Bulrampour - F t
Bulrampour - L z
Bulsee - K w
Bumany O m
Bummoneah - L r
Bundar - L u
Bundar - N n
Bundeh Mts. - P q
BUNDELCUND - H r
Bunderaje - M o
Bunder Larry - I c

Bundowrah - N r
Bungong - K a
BUNGUSH - A g
Bunjara - M n
Bunjarata - K o
Bunjury - L r
Bunnafs R. - K q
—— (in Oudipour) I l
Bunneyah - I o
Buntwal - W l
Buntwar - F t
Burarya - G w
Burda R. - N p
Burdee - I t
Burdjee - Q m
Burdoo - I x
Burdwan - K z
Bureway - U o
Burgaut - L s
Burgur - M u
Burhai - H s
Burhanpour - M n
Burhampour - I a
Burkee - H p
Burkull - L m
BURMAH - M c
Burnagur - H *b*
Burnugger - H z
Buroda - M n
Burpudda - M y
Burpahly - M u
Burradirga - H *b*
Burragong - K t
Burragur - O w
Burragunge - F t
Burrakeera - M o
Burraboom - K y
Burrampour - O x
Burrampooter R. - G *d*
Burraserai - L o
Burrawny - M n
Burriage. See Baraitch.
Burronhutty - L a
Burrunter - I *d*
Burwa - P i
Burwa - N y
Burwa - K w
Burseeah - K o
Bursingpour - K q
Bury - M r
Busowrah - N m
Bufai - I r
Bufary - I p
Bufseah - L x
Bufsoor - H t
Bufsanpour - I s
Bufsuah - G u
Bustar - M z
Bustee - G u

Butlafs R. - I k
Butteree - I t
Butty - L g
Bunungerkela - L w
Buxadaur - G *b*
Buxah - H t
Buxar - H w
Buxidaisy - N y
Buxygunge - H *b*
Byarem - Q r
Byarem - Q t
Byarum - Q u
Byce Gaut - D p
Bydell - H *a*.
Byganbary - I *c*
——— Cote - H *c*
Byga - I x
Bygongong - H *a*
Byra - G t
Byraghy - L u
Byserul - H n

C

Cabo - U l
Caboritor - Q m
Caboze I. - W *k*
CABUL - B d
CACHAR - I *f*
Cachi*permaleon* - X q
Cackaiah - L w
Cadet - Q n
Caderi - T p
Cadiapatam Pt. - *A* o
Cadrocapechy - X n
Cady - R n
Cariabad - F s
Cakenol - Q p
Calastri - U q
Cala - *A* o
Calaceri - Z n
Calacad - *A* o
Calara - Q q
Calberga - Q o
Calcheedo - T q
Calcutta - L *a*
Caliapour - L y
Calicoote - O x
Calicoulon - Z n
Calicut - X m
Calitoor - *C* q
Calini R. - F q
Calfian - O i
Callianee - Q n
Callianee - P p
Calleayé - K m
Calinatoor - X p
Caliparum - X n

Calingapatam - P w
Calour - R o
Callacoil - Z p
Callawar - L f
Callasgoody - Z p
Callianpour - F n
Calliondroog - T o
Callinger - H r
Callipour - P k
Callour - R n
Cally - W p
Calyajury - I *d*
Caloude - P m
Calpenteen - *A* q
Calpauny - G *b*
Calpy - G r
Calsary - M g
Calapar - Z o
Calventura Is. - R y
Calymere Pt. - Y q
Cally-Sinde R. - I n
Cambala Mts. - C c
Cambergam - P l
Camberry - Y n
Cambay - L i
—— gulf of - M i
Cameredy - P p
Cameran - Y m
Camlah - M n
Camlole - L k
Cammaserai - N n
Camma - O *b*
Campoly - P k
Campsella - P k
Camvellaw - G z
CANARA - T l
Cananore - X m
Candanada - Z n
Candapautta - S p
CANDEISH - M m
Candi - *B* r
Cane R. - H r
Cangal - R r
Canercotta - B o
Canhan R. - K u
Canister I. - W k
Cankanally - W o
Canoge - F r
Canooly - N q
Canol - R o
Canoul - S p
Canowly - N q
Canroody - K s
Canswab R. - M f
Cantalbary - G *b*
Cantap - H k
Cantee - O p
Canuck - I u
Capelapaire - W q

Capilly - T o
Caponsee - M o
Caprah - F r
Caraijah I. - P i
Caragola - H y
Caramnafsa R. - H u
Caranel - X o
Caradoam - O n
Caralicote - P p
Carapatam - R k
Carcal - Q o
Carcal - Q q
Carenave - *A r*
Careatty - *A* r
Carha - O q
Carical - Y q
Caridien - *A* q
Caringa - M q
Carmulla - P m
CARNATIC - X q
CARNATIC, NABOB of, his territories - W q
Carnatic Gur - W q
Carnawl - D n
Carnicobar I. - *Z f*
Caroogaly - W r
Caroul - P o
Carpour - X q
Carree - I *b*
Carotcotty - A n
Carrow - M *i*
Carroor - U m
Carroor - X o
Carrya - K i
Carrypour - G r
CARTINADDY - X m
Cartute - Z o
Carunapally - Z n
Carwar - T l
Carwaree - S r
Carwaree - T q
Carygong - O l
Caringalam - *A* o
Cafserbarry Gaut - N l
Cafserrah - F o
Cafsergunge - I c
Cafsumba - M m
Cataludy - X m
Cateapully - Q p
Catcheedoo - T q
Catchwana - G l
Catingoor - R q
Catmandu - E x
Catra - I t
Cattack - N x
Cavantandalum - W q
Cavai - W m
Caudamatris - *A r*
Caudergunge - F q
Cauvery R. - W n
Caverypatam - W p
Caversundrum - S n
Caugmahry - I *b*
Cavicoada - V o
Caumpelly - Q q
Caundapaddy - X o
Caunitoor - W r
Cautgunge - H x
Cawderchuck - F q
Cawnpour - G r
Cayamel - *B* q
Cayen*gunge* - F q
Cayetar - *A* o
Cayvaram - U o
Chenapatam - W o
Cerailgui - Q o
Cercoil - U p
Cercal - U l
Ceremudge - X o
Cerigat - Y n
CEYLON - *B* q
Chacki - I y
Chacultury - K y
Chagong - M *k*
Chagoola R. - I c
Chamka - E g
Champaneer - L k
Chamulgoody - Z p
Chanda - N q
Chandail - I t
Chandalcotta - R p
Chandanyporody - O n
Chandernagore - L *a*
Chandergunge - L *a*
Chandegheri, or Kandegheri - U q
Chandercona - L z
Chanderee - I p
Chandek - N n
Chandor - N l
Chandore - M k
Chandpour - D p
Chandpour - K c
Chandpour - D p
Changama - W p
Changaprang - B y
Changlasee - C z
Chankeer - P k
Chankalamary - S p
Chanmanning - C *b*
Channel Creek - M *a*
Chanyang - P *b*
Challa*mcotally* - U p
Chalcounda - U p
CHALAWARA - L n
Chalsey - N m
Chaparo - S k
Chaparang - A q
Chappermunda - K u
Charcolly - L *c*
Charbafs - G m
Chargner - O n
Charkeera - L o
Charley - M m
Charmour - N q
Charwah - L o
Chayatpour - H u
Chasow - G n
Chatchar - E n
Chatmol - I *b*
Chatna - K z
Chatrum - W o
Chatroy - Q s
Chatterpour - I q
Chattibarry - K u
Chattour - Z o
Chaunky - F w
Chauttra - F o
Chayah - K o
Cheduba I. - P *f*
Cheera - K o
Cheeran - H x
Cheego-Muddi - K e
——— Hills - *ib.*
Cheerapour - F r
Cheitore - H l
Chemorchy - G *b*
Cheneroypatam - W n
Chenipollam - T r
Chepauny - L o
Chercot - R o
Chercouchy - X q
CHERICA. It borders on the north of COTIOTE.
Cherowly - G q
Cherki - E n
Cherugatta - Y n
Cheticolon - X p
Chetigua - Y *l*
Chetra - I w
Cheturgow - O l
Chewny - *L* o
Chiandeghery - W l
Chiblone - Q *k*
Chicar - N g
Chicaur - W q
Chicacotta - G *b*
Chicalapour - U o
Chickley - M m
Chickley - N k
Chichery - K w
Chilka lake - O x
Chilkore - I z
Chillambrum - X q
Chillumcaal - T p
Chilongery - U n
Chilmary - H *i*

Chimillyconda - Q r
CHINA - H *l*
Chinabackeer - R *c*
Chinampet - Z p
Chinampet - U q
Chinchicam - R n
Chinchouly - P o
Chinchelly - O n
Chingalamoly - T o
Chingonga - N p
Chingleput - W r
Chinna Balabaram - U o
Chinny-Arcaud - U q
Chinsura - L *a*
Chintalpollam - R q
Chintapilly - R r
Chint*amypet* - Y p
Chin*laminny* - U p
Chippepar - Z o
Chirkooty - S r
Chircumally - R r
Chirkoury - P q
Chitapilla - T p
Chitchura - M s
Chitchelee - K w
Chitel - M g
Chitpour - K k
Chitpour - M g
Chitma - L t
Chitteput - W q
Chitteldroog - U n
Chittergur - O x
CHITTIGONG - L *e*
Chittimoty - Z n
Chittoor - Y o
Chittoor - U q
Chittra - I w
Chitwa - Y m
Choarypol - X o
Chobra - H x
Chocbar - H d
Chodacut - G x
Chogda - K a
Chogong - I *b*
CHOHAN RAJAH K t
Chokee - P k
Chomlah Mts. - E *a*
Chonday - M n
Choohoond - I o
Choorhut - I t
Choramba - P h
Chornah - I u
Choudagong - K *d*
Choudapilly - P p
Choukary - H s
Choukee Mts. - F *d*
Choulney - X p
Choumundaly - L o
Chourapilly - U p
Chouragur - L q
Choury - L r
Chowara - G u
Chowle - P i
Chowka - L o
Chowka - I q
Chowny - H r
Chowsar - H w
Chowta - K z
Chuckerya - M *e*
Chuckrabatta - L t
Chulymiſser - L m
Chumarty - M n
Chumbul R. - I l
Chumka - G w
Chumpa - K w
——— Gaut - O x
Chumrah - N w
Chuna Gaut - H p
Chunargur - H u
Chuncher - I t
Chundula - K t
Chundun - Q l
Chunnapunnah - K q
Chun*ab* - P k
Chuppara - L r
Chuppaleah - I *b*
Chuprah - H w
Chuprah - G w
Chuprah - M m
Chura - L h
Churacooty - M y
Churacooty - L y
Churamond - H *a*
Churcar - H s
Churcar - K e
Chury - K i
Chuska - D y
Chuta Nagpour - K x
Chuteah - F u
Chutterkote - H s
Chutteah - K x
Chuttypaloo - *ib.*
CHUWAL - K h
Chychendy - G r
Chytee - N q
Cianganeri - *A* o
Cibulon - D *a*
CICACOLE - P u
Cicacole - P w
CINNAMON TRACT *B* r
Ciopra - E x
CIRCARS, NORTHERN P u
Cirvalla - S p
Ciucior - C *d*
Clavandy - Y o
Coacher - H w
Coadlatoor - *A* p
Coanjong - Q *b*
Coanjedla - Q r
Coas*courchy* - Y p
Cochin - Z n
COCKUN. The same as CONCAN.
Cocos Is. - T *f*
Codagunge - F q
Codaly - R k
Coda*meamally* - Y p
Coddarama - M i
Codjeedeep I. - M *a*
Codour - R o
Coël - F p
Coenaker - *D* s
Coguir - P p
Cohary R. - G p
Coidure - X q
Coillee - G x
Coilandy - X m
Coilpetta - Z o
Coilurepet - X p
Coilurepettah - Z o
Coimbettore - X o
Cojapour - G u
Col - S k
Colair Lake - R s
Colaircotta - R s
Colamungulum - Y o
Colangooda - Y n
Colapelly - Q q
Colapelly - R r
Colapour - N p
Colar - U p
Colarus - H o
Colavery - Z n
Coleche - *A* o
Coleapol - L y
Colgong - H y
Colgu - W m
Colinda - L *d*
Collabegoon - N *i*
Collabaug - I o
Collacood - Q r
Colladicoodu - Y n
Collewah - M *k*
Collispauk - W q
Colliwilly - *A* r
Colly-muddy - F q
Colnah - K *b*
Coloal - W l
Coloum*aser* - Y p
Colourpour - K r
Colour - U n
Colour - R r
Colovety - X o
Columbo - *B* q
Comade - M i

Comargong - I *a*
Comarceah - L *d*
Combam - S q
Combamet - Q q
Combiconum - Y q
Combonore - W p
Comeer - F o
Comerla - T p
Comery - Z p
Comercally - K *b*
Cometta - S p
Comillah - K *d*
Cominaig - Z o
Comiſserra - H u
Commen*dagur* E p
Commerputa - C *c*
Comni - T q
Comole - L i
Comorin Cape *A* o
Compsey - U m
Conanore - Z p
Conalore - W q
CONCAN - Q k
Conchon - H *a*
Conchanagur - L *d*
Congcoal - R s
Concul - D p
Condala - Q r
Condally - M q
Condalavery - P o
Condanore - S o
Condanore - R o
Condapilly - R r
Condapour - K p
Condavir - R r
Condaramarla - U p
Condel - S l
Condeli*gourki* - U o
Condour - Y q
Condour - U p
Condolory - P o
Condoyouah - M *k*
Condemundago - S o
Conderputty U n
Condrapatty - R t
Condyeura - I *c*
Congar - P o
Conkapaukoo - Q q
Congayempaliam X o
Conghé Lake - A s
Congong - I *f*
Conguntla - T o
Conijedla - R r
Coniwaugh - Q *b*
Conjeah - L *b*
Conjeveram - W q
Conjimere - W r
Conka - T q
Connagoody - Y p
Conniacombri - *A* o
Connigurry - Q r
Consumah - H *a*
Conta - L y
Contay - M z
Contalagur - H *a*
Conyouwah - M *i*
Conyouwah - O *b*
Coogreet - M w
Coohoor - M p
Coolabba - P i
Coolair - T q
Coolangee - W p
COOLIES. Freebooters on the north of the Myhie R.
Cooloo - N x
Coolpahar - H q
Coolybunra - K x
Coolynorcha - N f
Coomareah - L l
Coomtah - M r
Coomtah - T l
Coonaterra - Y n
Coondapour - U l
Coondabarry - M l
Coonum - U r
Coontah - M y
Coopah - G u
Coopachitty - X o
Coopilly - P w
Coorah - K o
Cooreah - F r
Coorsah - G *b*
Coorung - I y
Coos-Beyhar - G *b*
Cooserah - H x
Cooserynagur - I q
Coosmah - J u
Coosumbah - M l
Cootally - *A* p
Cope - Y p
Corah - G r
Corallum - Q t
Corallya - K *c*
Coramba - K w
Corampour - E n
Coraygong - Q l
Cordevanputty - Y o
Corelly - M i
Corera - M f
CORGA - W m
Cori - F o
Coriahgunge - F p
Corinattum - X o
Coringa - R t
Coritachitty - Y q
Coritapetty - Z o
Cornogal - *A* r
COROMANDEL X r
Correah - K r
Corunkeer - N o
Coronum - P w
Cortale - X m
Corry - *ib.*
Cosa R. - F y
Cosalsurar - N q
Cosmin - R *b*
Cospour - I *e*
Coſsaijura - L z
COSSAY - L *b*
Coſsepary - X q
Coſsibogom P w
Coſsimabad - H u
Coſsimbazar - I *a*
Coſsimcotta - Q u
Coſsipour - D q
Cotapar - S q
Cotapatam - Z q
Cotate - *A* o
Cotbanawer - F o
Cotla - I o
Cotla - P k
Cote Coſsim - E o
Coteen - T p
Cotemul - *B* r
Cotiara - *A* s
COTIOTEE. It borders on the north of Cartinaddy.
Cotour - W p
Cotputli - F n
Cotta - P o
Cotta - R o
Cotta - X m
Cottacotta - S q
Cottacotta - T o
Cottapatam - T r
Cottapilla - T o
Cottapilla - U q
Cottapollam - P u
Cottapollam - R r
Cottapollam - U p
Cottapoloor - U x
Cottaseveru - T o
Cotteput - X p
Cottilah - F o
COTTIWAR - M g
Covanore - Z p
Coveripauk - W q
Covelong - W r
Coveriporum - X o
Coulam - *A* o
Coulan - *A* n
Coulasgur - W q
Coultschi - B s
Counda - R q
Coundour - S o
Courgegur - U n

Courtallam - Y p
Courtallam - X p
Coutoor - Z o
Cow I. - Z q
Cowkparah - L y
Cowlydroog - U l
Cowyar - M *k*
Coyeah - F r
Coyle R. - L x
Coyr - Q p
Corriah - M r
Cranganore - Y m
Craor - O o
Cravatore - O o
Crimal - Q s
Croondah - O m
Crotchey - I c
Cuckanara - R t
Cucula - R q
Cuckeree - I r
Cudaly - M h
Cudapanattam - U p
Cuddalore - X q
Cuddapa - T p
Cudgwah - G r
Cudgenere - K n
Cudoogal - R p
Cudwah - K *d*
Cudruah - L *k*
Culdumery - K u
Culna - K *a*
Culna - L *b*
Culloor - Q r
Culloor - R r
Cullumbaum - Y o
Culpatty - X n
Culpy - L *a*
Culwara - M r
Cumbermere - H l
Cummao - F k
Cumlapour - Q l
Cumrai - I r
Cundamahully - W m
Cundamungulum - X q
Cundera - P k
Cundola - L g
Cundoor - R r
Cundwah - H y
Cundwah - I r
Cungwar - E p
Cung*ovelly* - X p
Cunjah - L u
Cupperwange - L k
Curchi - G x
Curcumbaury - U q
Curcunda - Q r
Curegonpal - S q
Currah - H s
Curraly - H s

Currambos - E p
Currer - Q l
Currimgunge - I *d*
Curro - P k
Currowly - O i
Curruckdeah - I y
Curruckpour - H y
Currumfully R. - L *e*
Currumpoody - R q
Curruah - K s
Curso - M u
Curtchavid - S q
Curtelly - M s
Curwar - E r
Curwan - M k
Curya - E s
Curygong - H *b*
Cushancollam - Z p
Custee - K *b*
Cutarya - R g
CUTCH - K f
——— Gulf of - L e
Cutchnor - I p
Cutchubary - G *c*
Cutgurra - L t
Cuthni - E r
Cuthur - M h
Cutkurry - I t
Cuttack - N x
Cuttagallu - T p
Cuttera - E q
Cutterya - I y
Cuttiparah - M y
Cuttore - M i
Cuttree - H x
Cuttupdeah - M *d*
Cutter*mungulum* - A p
Cutwa - K *a*
Cutwara - G s
Cutter*agurra* - W p

D.

Dabenkanoo - H m
Dabogya - G q
Dabul - Q l
Dacca - K c
Dacca - G x
Daccapilly - R q
Dackowny - I p
Dadary - E o
Dagurer - O o
Daipilly - P u
Daisoor - W q
Dalamow - P s
Dallamow - L y
Dalmacherry - U q
——— *Passes.*

They are three in number, near the town of that name. Two of them lead to Mysore; and the third to Cuddapah.

Dallycotta - Y o
Dalmow - G s
Damapetta - Q s
Damapoury - P q
Damaraupet - O q
Damaun - N i
Damerlapaud - S q
Damicotta - X n
Damisierla - T q
Dammoo - N i
Dammal - S n
Damoony - K q
Damoot - O k
Damra - Y p
Damsong - F *a*
DANDAR - I k
Dander - I w
Dangee Praw - M *i*
Dantoon - L z
Daogaut - F w
Daoudnagur - H w
Dapette - Q o
Dar, or Dhar - L m
Darracoote - O w
Darrah - I z
Daranduk - P o
Daraporum - Y o
——, Keelah - Y o
Daraveram - T o
Darbel - G f
Darempoury - W p
Daried - Q r
Darinagur - D p
Darmadijira - A r
Darore - P n
Darraway R. - I c
Darraway R. - I d
Darrug - M t
Darwar - R m
Dary - F g
Dasonkar - O o
Datha - H s
Datta - M h
Datteah - H p
Daubow - L o
Daudpour - K *b*
Daumnagur - N y
Daragoodam - R t
Dawapour - H r
Dawl - I *d*
Debalpour - K m
Debarry - N n
DEB RAJAH - P c
DECCAN - W m

DECCAN, SOUBAH of, his Terrs. - Q n
Deccan Shahbazpour L c
Deckanpour - L o
Deckenal - M y
Decla - W l
Decurchutta - M s
Deemah - H z
Degligi - *B* r
Degourpar - S r
Dehatya - F s
Dehtly - L f
Delawar - N f
Delbatta - Q i
DELHI - E o
Delhi - *ib.*
Dellamcotta - F *a*
Deloud - K o
Dely - N m
Demalcotta - S p
Denavaca - *C* r
Deneacolly - L *a*
Denebue - Q *i*
Denkina - W o
Denseray - F p
Deogur - G p
Deogur - I y
Deogur - M q
Deopour - I y
Deolary - E q
Deony - R n
Deorbedga - M s
Deorcodra - R p
Deorsagur - R o
Deot*an* - O m
Deounella (birth place of Hyder Ally - U o
Depah - L z
Depatla - U p
Dergong - I q
Derriabad - G s
Deriabad - F r
Derry - M g
Desburriah - M i
DESERT of Agimere F h
DESERT of MOULTAN D i
Devalcotty - A n
Devalcotty - B o
Devicotta - X q
Devidan - Y o
Devipatnam - Z p
Deviryconda - R q
Deulgong - N n
Deutan - N m
Dewad - L k
Dewah R. the same with the Gogra R.
Dewalgong - N n
Dewan - L i
Dewancole - M u
Dewangunge - G y
Dewanguage - H *b*
Dewanserai - I *a*
Dewar - I x
Dewasghera - I n
Dewgawry - M t
Dewgur - R k
Dewree - L r
Dewry - N q
Dewrya - M t
Dewsor - M u
Dhapour - O l
Dhar, or Dar L m
Dharamsaleh - B s
Dhoolpour - G p
Dhoopour - H n
Diamper. The same as Udeampour - Z n
Dibdonda - P o
Dickvel - *D* r
Didiconda - T o
Didwana - F m
Dig - F o
Dig - A h
Diggy - M t
Dignagur - K z
Dilla Mt. - W l
DILZAT ROY, Terr. I s
Dimal - Q q
Dimmoody R. - F l
Dinagepour - H *a*
Dincole - M l
DINDIGUL - Y o
Dindigul - Y p
Dindoory - N k
Dioly - P k
Diu Pt. - N f
Diu I. - N g
Divinelli. See Deounella.
Divy Pt. - S s
Doareah - L e
Doarsinny - L y
Dobygur - W q
Doesah - K x
Dogon - R i
Dohud - L l
Dojon - X p
Doley - I z
Doldegam - *B* r
Dolla - R *i*
Dollopattagam - *A* r
Dombes - M i
Dombuck R. - N *e*
Dommary - F q
Donah - O k
Donderiky - O n
Dondigul - Q p
Dondrahead - *D* r
Donduca - L i
Dongartal - M q
Dongong - L u
Dongow - P *b*
Dongree - H p
Dongrine - S l
DOOAB - F p
Doogur - O i
Dooliapour - L *a*
Doomah - L r
Doomah - M u
Doondatcha - M l
Doory Gaut - G u
Doorup - N l
Doowoor - T q
Dorazy - L f
Dornal - T q
Doudeandy - K *c*
Doudpour - G t
Doula Bassendar - D s
Doumangur - S l
Doupar - S q
Dowdand - I z
DOWLATABAD P l
Dowlatabad - O m
Downapour - H u
Downdekario - G r
Dowraligow - O l
Dowrapilly - Q u
Dowrya - G w
Dowry - L r
Douë - E o
Drangdra - L h
Drapajoodpour - L f
Dua - R s
Dubba Fettee R. I c
Dubally - H z
Dubhoi - L k
Duboda - K k
Duckinseek - K *d*
Dudagam - P q
Dudawanum - *A* o
Dudgullow - Q t
Dudypalla - I u
Dulabary - I *a*
Dumdah - M s
Dumow - I r
Dummoodah R. - K z
Dumnagur - M h
Dumnah - I y
Dumroy - H w
Dumroy - K *c*
Dundapour - G y
Dunda Rajpour P i
Duncore - E o
Dundrahead - *D* r
Dungergur - M s
Dungerpour - K k

Dungham - I d
Dunna - E y
Dunteewara - I k
Duntola - G *a*
Dunwah - I z
Durajah - K o
DURANNIES. The same with the ABDALLI.
Durapour - N x
Durbunga - G y
Durgapour - D p
Duregapour - H c
Durfurry - G x
Durrampour I z and N k
Durranneah - F s
Durrole - L f
Durya - H y
Duryapour - G u
Dursunny - K r
Dusara - K g
Dufsaun R. - I q
Dutty - M g
Dyalla - M l
Dyhinda - N o
Dynapour - X x

E.

Earoor - X q
Eätt - F s
Edalla - H s
Ecmangunge - I w
Econah - H r
Ecpol - *A* r
Ectowah - H r
Edalli - N o
Edghir - R o
Edgong - M *e*
Edilabad - M n
Ednagur - O o
Eemleah - I t
Egorapan - T l
Eiljapour - P n
Ekilgow - O l
Elaw - M i
Elaeur - Z o
Eldourty - Q p
Elephant Mt. - *C* s
Eletur - R r
Elevoneah - U o
Elgandel - P q
Ellaconda - S p
Elledat - *B* r
ELLICHPOUR - O o
Ellichpour - M p
Ellomamew - P h
ELLORE - R s
Ellore - *ib.*
Ellore - T o
Elmunchilly - Q u
Elora - O m
Eloremow - U m
Emilipata - S q
Emmilee - H s
Emnabad - Q o
* Emodus Mts. - C *e*
Enamalore - S r
Enapour - R l
Encetram - O q
Endapilly - Q t
Endapour - U o
English Bazar - H *a*
Ennore - U r
Ennow - G c
Epour - Q l
Erach - Z p
Erachetty - Z o
Erammo - L e
Erasmus Mt. - *A* r
Erilpaal - I *b*
Erroad - X o
Erotah - X n
Esarbary - M k
Esperah - Z *l*
Etah - F q
Etaveram - Z p
Etayah - G q
Etchauk - I x
Etonda - F x
Eughtgur - K n
Eydy-Engly - R m

F.

Faas - O l
False Pt. - N y
Faranagur - R p
Fargaun - P l
Faridabad - E o
Farognagur - E o
Farree - I t
Farsidunga - G *a*
Fattalagunge - E q
Fattipour - F m
Fattipour - F p
Fattipour - G x
Fatiabad - F p
Fazilpour - L k
Fettee - K c
Firozeabad - F p
Firozeabad - E p
Firozeabad - F n
Fitzegunge - E q
FIZOOLA CAWN, Terrs. of - E q
Foolpour - H u
Fornical - S o
Fortified *I.* - T l
Fort St. George - U c
Fort William - L *a*
Fotipet - U l
Friat's-hood - *B* s
Fringypet - W l
Fringybazar - K *c*
Fullertol - E r
Fulta - L *a*
Fultawarry - G z
Furridpour - E q
Furruckabad - F q
Furruckabad - I z
Futtigur - F q
Futtipour - H s
Furtagunge - G t
FUTTY SING GUICUAR. See page cxxv.
Futwa - H x
Fygurcara - N n
Fyzabad - G t

G.

Gaderow - M g
Gaderow's *Choultry* - Q q
Gadibunda - U o
Gaganagurra - W p
Gaguimpar - Q p
Gajara - H p
Gajeram - Q s
Galgala - R m
Galle, Pt. *de* - *D* r
Gallitany - P p
Gallionew - Q j
Gandgourly - P p
Gandhar - G n
Gandicotta - T p
Ganegam - *C* r
Ganeygong - P l
Gangacotty - B n
Gangalagutta - R q
Gangapatnam - T r
Ganges R. head - A q
——— mouth - L *c*
Gangoutra - A n
Gangpour - L w
Gangud - *L* i
Ganjam - O x
Gansigui - O n
Ganuara - Q p
Gaovan - P o
Garda - P w
Gardone - P l
Garha R. - G n
Garracoury - Z p
Garrider - M g

GARROWS - H *c*
Gary - K h
Garseela - L y
Gauswanny - H o
Gaut Mts. - R k
Gawile - M o
Gawrah R. - E r
Gawzygur - H o
Gayah - I x
Gaylah - F u
Gazeedeen - E o
Gazypour - H s
Gazypour - H u
Geerar - N q
Gegadivy - W p
Gege - Z n
Gehanpenna - E o
Geharconda - M o
Geligonda - S q
Geluda - H o
Genapilla - T q
Gendur - Q n
Gentemanitour - X q
Gentiah - H *e*
St. George - Y q
St. George's I. - S k
St. George's Channel *B g*
Gereek - H x
Ghelsipour - H n
Ghergong - G f
Gheriah - R k
Ghiddore - I y
Ghirnah R. - N m
Giddatoor - Q t
Gierga - L z
Gigatchee. See Sgigatchee.
Gikri - G l
Gilmarguey - O o
Gingee - W q
Ginipaliagarum - X n
Ginnish - L i
Girar - I q
Giti - A q
Gitpour - F w
Goa - S k
Goalparah - G *c*
Gocey - G u
Goculgur - F q
Godawery River - P q
——— mouth R t
Godra - L k
Goelwarah - M h
Gogary - H y
——— River - *ib.*
Gogo - M h
Gogoromow - L e
Gohana - E n
Gohud - G p
Gokaup, or Goulkoun R l
Golah - K x
Golamary - L y
Golapilly - R q
Golipilly - S q
GOLCONDA - R p
Golconda - Q p
——— old (O) - *ib.*
Golerampilly - Q q
Golgam - P p
Golgam - *A* r
Gollapollum - R s
Golobgunge - I *e*
Golonore - T r
Gomany - L y
Gomaun Mts. - C n
Gomgah - L u
Gomnialpar - S q
Gompchei - E r
Gomrapondy - U r
Gomut Peperee - O l
Gonanpilly - R s
Gonary - T n
Gondwara - H z
Gondicotta - Y p
Gonga-Godowry - O k
Gonjenpilly - T r
Gonor - H q
Goura - H s
Gountapilly - Q t
Gowra - L i
Goodwater I. - Z p
Goodalore - Z o
GOODIERS. A people who occupy the side of the Ganges opposite Rohilcund.
Goodingary - *A* o
Goodoor - S o
Goodoor - Q q
Goojindergur - R m
Gool R. - M m
Goolapilly - W p
Goolgunge - I q
Goomah - I x
Goomgong - M q
Goomerpour - H u
Goompina - Q r
Goomty R. - G s
Goondah - F t
Goondillypella - W n
GOONDWANAH M p
Goondwanah Mts. L p
Goopamow - F r
Goopygunge - G q
Gooracpour - G u
Goorah - G s
Goorah - H s
Goorunty - O x
Goota - N q
Gootoka - L t
Gooty - S o
Gopaulgunge - K *b*
Gopalnaigur - K *e*
Gopalpour - H o
Gopalpour - K i
Gopalpour - K r
Gopalpour - L o
Gopchin - F s
Gopetapilly - Q q
Gora - I t
Goragot - H *b*
Goraygong - Q l
Gordeware Pr. - R t
Gordygong - L r
Goriatum - W p
Gorka - E w
Gorka - F o
Gorpeta - N q
Gorsiah - L e
Gorua - I w
Gossypour - H t
Gottaul - L z
Goverdan - F o
Goverdan - G u
Governdungurry T l
Govery - Q s
Govinpour - I x
Goulamconda - S o
Goulkoun - R l
Goulpur - S m
Gour Ruins - I *a*
Gourgouty - R o
Gourmungul - Q o
Gourpour - W l
Gow - I w
Gowgat - F p
Gourah - L x
Gourey - F r
Graen - Q l
Grammum - W n
Grenier Mts. - L g
Groapnaught Pt. - M h
Gruapet - U q
Gubinagur - G *a*
Gudgow - E q
Gudgow - N m
Gudjara - G p
Guineara - L t
Gulshgunge - K o
Gullapalloor - Q t
Gullary - R m
Gullipanaig - Z o
Gulma - G *a*
Gumiapilly - R s
Gumipillam - U p
Gummurge - I t
Gumplegood - Q r
Gumsoor - O w

Gundar - M i
Gundavee - N i
Gundavow - M e
Gundell - M g
Gundewah - Q b
Gundiaw - I d
Gundigul - R s
Gundilipally - X n
Gundoor - R s
Gundoor - T q
Gunduck R. - G w
Gunganar - U l
Gungaveram - T o
Gungolee - U l
Gunjew - I s
GUNTOOR - R r
Guntoor - ib.
Gurewar - F t
Gurga - I u
Gurhady - M y
Gurmacktisher - E p
Gurmada - S p
Gurmah - I z
Gurnady - L c
GURRAH - I r
Gurrah - K r
Gurramconda - U p
Gurrood - I u
Gurry-Mundlah - K r
Gursenry - K u
Gursoot - K m
Guruza - R s
Gutigui - R n
Gutterana - S m
Guttura - H r
Gurymary - G c
Guy G. - I u
Guzelhatty - X n
GUZERAT - L h
Guzgotty - H b
Gwalior - G p
Gyalgur - M o

H.

Hafizgunge - E q
Hajygunge - K b
HAJYKAN - D f
Hajypour - H m
Hajypour - H x
Hajypour - K h
Hakman - C r
Hallegandhe - H e
HALLIAR - L g
Hamapet - Y q
Hamapatti - Z o
Hamed - F r
Handya - G n
Hanepari - X q
Hanole - L k
Hanoura - F p
Hansquar - G a
Hansoot - M i
Happer - E p
Hargur - I u
Harlia - R q
Harowly - F p
Harponelly - T m
Harriorpour - F x
Harriorpour - G s
Harriorpour - M y
Harriergunge - H w
Harrichunder - O k
Hafsengur - E o
Hateoule - G x
Hatin - E o
Hatta - I t
Hattanudda - M w
Hatteenoo - M g
Hatteri - P f
Hattish I. - L d
Hautchella - H b
Hautdobé - M s
Hautgur - O x
Hautimabad - E p
Hazeratnagur - D q
Hebbore - U o
Heerapour - I q
Heerapour - L r
Heerapour - M k
Heerapour - R s
Helawak - Q k
Helfautgunge - G t
Helpitin - C r
Hemynpour - G r
Hendowne, or Hindia G o
Heran R. - K r
Herapour - N m
Herpett - U q
Hefserah - P m
Hevilkaserai - M n
Hierapoltum - S q
Hieracura - R q
Hieropomal - K b
Hilconour - U m
Hillegurry - U n
Hilsah - H x
*Himaus Mts. - D w
Himmaleh Mts. - E x
Himmutnagur - G z
Himrana. See Nimrana.
Hindeany R. - T n
Hindia - G o
Hindia - L o
Hinjin - P l
Hiralt - U m
Hirria - E r
Hitchenderry - G z
Hobibgunge - K c
Hogenpour - U m
HOLKAR, Terrs. of K m
Honanulla - S m
Hoogly - L a
—— R. - M a
Hoolsury - Q o
Hoorel - F o
Hooriegotta R. - M c
Hoornily - T m
Hordy - O n
Hosangry - U l
Hosecpour - G y
Hofsamally - L i
Hofsaree - U l
Houchong - I g
Houmenara - N l
Howafsa - K k
Huhely - S m
Huddlegur - M w
Huldiharry - G a
Huldipookra - L y
Huldooah - F p
Hulleah - I t
Hulluah - L k
Hulwad - L g
Hunary - P i
Hungtong - I b
Hunnoaar - W n
Hurdah - L o
Hurdwar - D p
Hurrai - H r
Hurruh - F p
Hurryal - I b
Hurrydurp Gaut. It lies on the S E of Ryacotta W p
Hurryhur - T m
Hursaloo - G l
Hufseingunge - F q
Hufsingabad - L o
Hufsun Shah Dirgah Q p
Hutwa - H s
Hutsoo R. - L t
Huttani - Q m
Huttah - I r
Huttoosh - H s
Hyat - R o
Hyatnagur - Q p
Hyatpour - H a
Hydergunge - F t
Hydergur - G s
Hydergur - U l
Hydershi - Q q
Hydrabad - H e
Hydrabad - Q p
Hyjamanny R. - I e

I.

Jabbuah - L l
Jabolpour Gurrah K s
Jacktal - P q
Jaculgong - P o
Jadevar - R l
Jadopour - K *b*
Jael - F m
Jaffierabad - L *d*
Jaffierabad - N g
Jaffierabad - N n
Jaffiergunge - K *b*
Jaffnapatam - Z r
Jagarnaut Pagoda O y
JAGHIRE, East-India Company's - W r
Jagopour - G s
Jagreh - F l
Jagrenatpour - R t
Jaharumpilly - P o
Jainad - O q
Jalemgary - R o
Jalloo - D p
Jaloan - G q
Jalour - H k
Jamboo - L h
Jambuddeah - L z
Jamdro Lake - D *c*
Jamespour - E n
Jamgong - O l
Jamgong - O n
Jamla - K l
Jamoorgong - N n
Jampour - I h
Jamulmuraag - T p
Janagur - K g
Jangagur - L n
Janguira - H y
Jangegur - L t
Janguirabad - E p
Janiacopet - U m
Janicpour - G y
Janmier - M h
Janana - N q
Jansi - H p
Janteca - S n
Jarbarry - H *a*
Jargepour - N y
Jargong - L z
Jarou-Sanpoo R. A s
Jarpour - O m
Jarra - H t
Jarra - I t
Jasingpour - G t
JATS, country of F o
Jattra - L z
Jaujesmow - G r
Jauldoe - K y
Jaulno - O n
Javerda - Q o
Jayes - G s
Jaynagur - K *b*
Jaynagur - I w
Jaynagur - I x
Jaypour - O t
Ider - K k
Jehanabad - H n
Jejuara - G x
Jejurry - P l
Jelalabad - F q
Jelalabad - G s
Jelalabad - H u
Jelalpour - H r
Jelaul - A h
Jella - P *b*
Jellantra - O w
Jellasore - M z
Jelassar - F p
Jellinghy - I *a*
——— R. - K *a*
Jelloud - G t
Jelmore - P w
Jelpesh - G *a*
Jemapetta - X P
Jengi - L f
Jenjapour - G y
Jennidah - K *b*
Jeraghi - K w
Jerdecker R. - G *b*
Jesselmere - F i
Jessont - G q
Jessore - K *b*
Jesul R. - H n
Jetpour - M f
Jigat Point - L e
Jigni - H q
Jingergutcha - K *b*
Jinzoowara - L g
Jionpour - H t
Jirree - H o
Jirwary - G p
Jiwar - G m
Iklera - K o
Iliacour - W m
Illahabad - O q
Illambazar - K z
*Imaus Mt. - D w
Inacoil - Z p
Inapour - R l
Inchacolus - H d
Indelavoy - P o
Indergur - N i
Indersoul - O m
Indore - L n
Indos - K z
Indrat - P o
Indus R. or Sinde G f
Inevaram - R t
Ingeram - R t
Ingurty - Q q
Injellee - M z
Innaconda - S q
Intawa - I r
Intour - S p
Joarya - M *e*
Jobah - L r
Jocroms - T n
Johanabad - M n
St. John's Pt. - N i
JOINAGUR. See Jyenagur.
Jolian - L h
Jompir R. - F o
Jona - E o
JOODPOUR - G k
Joodpour - *ib.*
Joogdya - L *d*
Joosy - H t
Joppa Burarya - G z
Joynagur - I *g*
Joypour - I *e*
Joypour - K y
Irabattey R. - K *l*
Iramally - Y o
Ircunda - P u
Irega - S n
Ires - H q
Irelly - Q q
Irenam - I *f*
Irgaong - N l
Irnee - O p
Islamabad - L *d*
Islamnagur - K o
Islampour - F m
Islampour - H x
Islampour - I y
Islampour - Q l
Issagunge - F s
Itchapour - N o
Itchapour - O w
Itchaur - K o
Juar - E p
Judan - O k
Judda - I s
Judookpour - I c
Jugang - D *a*
Jugdeere - H t
Jugdispour - G u
Jugdispour - H w
Jugdispour - H x
Jughigopa - G *c*
Jugrat - H p
Juhoo R. - I c
Jujumora - M u
Jukar - L f
Julganoo - M o

Julgong - O m
Julkanpour - K h
Julkuddar - M *e*
Jumbooah - L k
Jumbooseer - *L i*
Jumcundy - R m
Jumday - *I y*
Jumgerbad - H t
Jumilamurka - S q
Jummoo - M n
Jummaneah - K *a*
Jumnah R. - D o
Junaghur - M f
Juncaw - L y
Juneer - O k
Jungile - I u
Jungipour - *I a*
Junglebary - I *c*
Junkseilon *I.* - *A l*
Junoh - K x
Juriahgur - K y
Jurilgunge - *L d*
Jurkone - I o
Jurouda - K p
JUSHPOUR - L u
Jutram - L i
Juttara - Q u
JUTWAR, Little - K g
JYENAGUR - F n
Jyepour - G n
Jyepour - N y
Jytepour - H r

K.

Kadraguta - L x
Kaigum - O m
Kajipet - T p
Kaimow - H q
Kaira - L i
Kakna R. - Q n
Kalgapet - *ib.*
Kalkally - O o
Kalkifee - C q
Kallodra - M i
Kanar Cataract - E s
—— Lake - D s
Kandabil - E d
Kandegherri - U q
Kangani - T o
Kangoon - P *b*
Kanhar R. - M *r*
Kanke - N q
Kankerara - H m
Kannaka - N y
Kanneah - D p
Kannya - F r
Kanoo. ra - L r
Kanoon - E n
Kanowly - P l
Kansa - E y
Kanwarah - K r
Kara - M g
Kara - N q
Karriarpour - G p
Karragode - *C r*
Karavan - F p
Karnawl - G x
Kasfgunge - F q
Kastee - P n
Katimbevole - *C r*
Katoene - *ib.*
Kattu - *G c*
Kaukanarow - N y
Kaumbole - R s
Kaurkah - G m
Kawah - N p
Kawtah - L x
Kayuwah - P *b*
Kedar - L z
Kedgoorah - H s
Keerah - I s
Keererpour - D p
Keerpoy - L z
Keeryehar - U p
Keescrah - R r
Kehuep - B g
Kelli-nelli-cotta - Y q
Kellinore - W q
Kelmee - O i
Kelsey - P i
Keltanpusnaclian - *C a*
KEMAOOM - D r
Kemaoon Mts. - F r
Kemgur - G y
Kenamow - G s
Kenawas - I n
Kendy - I x
Kenjar - H x
Kentchian Mts. - A s
Keogong R. - *Q b*
Kepeldee - X m
Kergong - L m
Kerigar - E s
Kerleh - L p
Kermana - F t
Kerona - H p
Kerowly - G o
Kerrah - M h
Kerroo - R m
Keryc - N k
Kerton - A r
Kesocotty - A n
Kevalcotty - B o
Kewan - I n
Kheir - P k
Khoud - M x
Khuntijaut - M i
Khunt Kote - K g
Kiangsee - *C c*
Kiankia - A t
Kierady - H u
Kilkare - Z p
Kilwara - H o
Kimedy - P w
Kimlafsa - I p
Kimmoul - N u
Kintarra - Q u
Kiranoor - Y p
Kiranore - Z p
Kirgonga R. - C s
Kirkee - I q
Kirkur - F q
Kiroll - F q
Kiroo - L w
Kisgoe - I y
Kishenagur - G m
Kishenagur - K *a*
Kifselpour - L w
Kifsoregunge - I r
Kistnabaram - T o
Kistnah R. - R m
Kistnagur - K z
Kistnapour - Y p
Kistnagherri - W p
Kistnapatam - T r
Kistnapurum - R p
Kistnaveram - X p
KITCHWARA - I n
Kitora - I s
Kitzhick R. - E x
Kivalore - Y q
Koelcotty - A n
Kokerwara - K i
Koketarra - L w
Kokore - I o
Kokra - M t and K o
Kolaboora - M u
Komara - T n
Konapour - S l
Kondur - P o
Kooch - G q
Koolbary - R r
Koond - H w
Koonda - I u
Koonjoor - M x
Koonka - K x
Koorbah - L u
Koorta - K y
Koorumba - P l
Kootakurwa - M n
Kooty - I u
Koram - D m
Korol - M k
Korsa - E p
Kotcheel - G m

Koterbugga - M u
Kotinghy - M t
Kotona - F n
Kotta - H n
Kotul - I r
Koty - I s
Koudra - L w
Koukhoun - Q *b*
Kouman - A r
Koumneon - L *k*
Kouta - Q l
Kowra - N *i*
Kowrah - M h
Kouratty - P m
Kozdar - C d
Kresabad - I r
Krijinagur - E o
Krijinagur - G n
Krishnah R. See Kistnah.
Kubbookah - D h
Kudda - P k
Kuduel - K x
Kulla - M g
Kullapollam - S r
Kullerwa - L s
Kundalla - P n
Kundawilsa - P u
Kundal - K *d*
Kunnipour - I t
Kupsinga - M u
Kurjaun - G p
Kurkumba - L u
Kurkuna - K u
Kurrah R. - P l
Kurregur - M w
Kurrera - H p
Kurrigora - L w
Kursy - N m
Kusbah - H t
Kutan - F s
Kuti - D y
Kutum - I u
Kydrebad - G t
Kyra - F q
Kyradaw - I p
Kyragur - M s
Kyranty - G *a*

L.

Lacarcconda - K z
Laccadive Is. - X i
Lachmangur - F o
Lackanwaddy - N o
Lackergaut - C p
Lacki - I *d*
Lackricotta - Y n
Lackritacotta - Q u
Lackritapilla - T p
Lackwalsa - P w
Ladoda - G n
Lahaur - G q
Lahorey - O i
Lajapour - M i
Laidalla - P q
Lalada - Q q
Lalcotta - R p
Lali - B s
Lalpet - W q
Lalsoond - G n
LAMA, country of D *c*
Lamané - Q *b*
Lamentung - C *c*
Lampacan - *B l*
Lampichikeon - S o
Langur Mts. - E *a*
Lanké Lake - A r
Laour - *H d*
Laraputten - R k
Laroah - M k
Larry Bunder - I c
Lafci - C *d*
Lafsour - O m
Latour - *ib.*
Laugeon - I *g*
Laura - G l
Laurow - I p
Laurow - I x
Lechwar - I y
Leda - M w
Lekinpour - N y
Lepenga - M u
Lepra Lankeng - E *d*
Lethers - M u
Limbra - M h
Limbry - *L h*
Lindeal - S p
Lingapour - O p
Lingumpilly - T o
Loardega - K w
Logom - P k
Logur - *ib.*
Lohari Napaul - F *x*
Loharcana - *ib.*
Loharoo - F q
Lohorpour - P r
Lohry - P g
Lokohar - G y
Lolbazar - G *b*
Lokleng - D p
Lolgunge - H s
Lolgunge - H t
Lolgunge - H u
Lolpour - G n
Lomby - X p
Lonee - P l
Loner - N l
Long I. - W *l*
Longee - O *i*
Lonhanko - K *k*
Loonpour - L g
Lopary - H t
Lorah - I u
Louar - P o
Lawcoory - H y
Lowdchah - H x
Lowrey - H r
Lowyah - G w
Luchnow Pafs - M x
———— Hills - *ib.*
Luckercoot - L l
Luckia - F w
Luckiduar - G b
Luckinpour - K u
Luckimpour - P w
Luckipour - *L b*
Luckipour - *L c*
Luckipour - *G b*
Luckipour - L r
Lucknow - G x
Luckour - K s
Luckumry - *I g*
Lunawara - K k
Lundsey - *P b*
Lungpour - *I f*
Lungry - M z
Luseenah - I n
Luteefgur - H n

M.

Maa - Q p
Maattan - G y
Macherry - F o
Macherla - R q
Machna - H K
Mackredypet - P p
Maconia - Q *i*
Maculpa - F x
Madhah - F s
Madiguer - S o
Madiguer - G y
Madee - Q p
Madalan - G o
Madenally - R o
Madore - W n
Madoocarry - Y o
Madras - U r
Madroo - W o
Madugar - G n
Madura - Z p
Magalawauk - U p
Magame - C t
Maganore - X p
Magaperam - S q

Megeeyong-collaw O *i*
Magegown - Q i
Mago - *C* s
Magracotta - Y n
Magua - Q p
Magullaconda - U o
Mahaconda*palli* - W o
Mahamundela - U q
Mahanuddy R. - N w
——— R. - M t
Mahanada R. - G *a*
——— R. - N w
——— R. - M t
Mahandpour - I p
Mahe - X m
Mahesra - F n
Mahmoodabad - *L* i
Mahmudpour - K *b*
Mahoba - H r
Mahomdy - F r
Mahomedabad - G u
Mahony - K s
Mahowly - F r
Mahrajegunge - G *a*
Mahrajegunge - I w
MAHRATTAS. See the names of the several Chiefs; Patshwah, Sindia, &c.
Mahruzgur - W p
Mahudwah - N g
Mahur - I s
Mahur - O p
Mahurry - K u
Maimbaya - O *b*
Maifey - G x
Makerdur - H o
Makoonda - I s
MACKRAN - E c
Malaac - K *i*
MALABAR COAST Y m
Malapour - R o
Malavilly - W o
Malbary - Q l
Malcapour - M n
MALDIVE ISLANDS, head of - *B* k
Malecotta - Z n
Maleghery - W o
Malhai - P l
Malicoy I. - *A* i
Mali*curginagur* - W o
Malighery - X p
Malikery - W n
Malkar - Q o
Malkapour - Q s
Malleam - Y p
Malletur - Y n
Mallown - I p
Mallyne - F r
Mallyoor - Y o
Mallyoor - Y p
Malo*cunna* - *Z* p
Malood - O x
Malour - X p
Malory - W p
Mal*paddy* - *ib.*
Malpatty - *A* r
Maltoy - M p
Malvana - *C* q
MALWA - K m
MALWANS - S k
Mamalagery - Z o
Mamanandy - Z p
Mamvracpour - I u
Mamdabad - F q
Mamenda - R q
Manacoody - *A* o
Manally - R n
Mannacote - E r
Manamangulum - Z n
Manapar - Y p
Manapar - *A* p
Manaperi - Y n
Manar I. - Z q
MANARA Gulf *A* p
Mangboom - K y
Manchul - H k
Mandatta - *L* n
Mandavee - O i
Mandavee - M k
Mandegele - *C* t
Mandelgur - H l
Mandery - P o
Mandu - W n
Mandun - K n
Mangalore - M f
Mangalore - S n
Mangalore - W l
Mang*alore* - W q
Mang*alore* - X q
Mangalum - Y o
Manganada - Y n
Mangarole. See Mangalore.
Mangatti - *A* n
Mangul - X p
Mangee - H w
Mangerbary - Q l
Mangrollah - M k
Maniahry - G x
Manjawick - Y q
Manickdurg - O q
Manickpatam - O x
Manicpour - H s
Manickraje - *K c*
Manjha - K q
Manilla - T o
Manimbodu - X q
Manimungalum W r
Manoor - Y o
Manoorgudy - Y q
Manoogur - O q
Manorcotta - Z o
Manore - O i
Manorpour - F n
Manot - O o
Manpour - I u
Manpurry - F q
Mansarore Lake - A r
Mansurcotta - O x
Manua - M h
Manwas - I t
Manzorah R. - P n
Maradecanum - P w
Marattour - R r
MARAWARS Z p
Marella - S q
MARHAT. The country now called BAGLANA N k
Mariarchy - *A* o
Maricolum - Y n
Marie - I p
Maripondy - S q
Maro - R *b*
Maroo - L t
Martaban - R *l*
St. Martin's Is. - N *e*
MARWAR, or JOODPOUR - G k
Masaibpet - Q p
Masan - F w
Mascall I. - M *d*
Mashorah - H x
Masulipatam - R s
Matgar - H n
Math - F p
Mathepour - M f
Matoo*bhackrapetta* U q
Matramoodo - T q
Matteloy - W l
St. Matthew's Is. Z k
——— River *ib.*
Mattour - R o
Matura - F p
Matura - *D* r
Maually - Q o
Mauderdully - X o
Mau*disimilia* - I y
Maudootand - E r
Maveriram - X q
Mavile - Q t
Mauldah - H *a*
Maultaveram, or 7 Pagodas W r
Maulsurda - L w
Mauncore - K z
Maundar - L z

Maundygaut - E p
Mauntry - M y
Mauphaze Bunder - P w
Mauripadoo - *ib.*
Maw - B q
Mayapour - K w
Maydooh - L *k*
Mayem - O i
Meachegong - O *b*
Meaoom - L *k*
Meahgurry - N m
Meaking - M *i*
Meambolangam - O *i*
Meamoy - M *k*
Meany-Choupa M e
Meany - M f
Meaudee - O *b*
MECKLEY - I *g*
Medama - B *r*
Medampe - B q
Medipilly - S r
Meendoor - K r
Meergunge - H t
Meerjaserra - H *a*
Meertah - G l
Meerzaw, or Merjee T l
Megna R. - K c
Mehindry R. - K i
Mehuntpour - I p
Mel I. - X *k*
Melcapour - M n
Melconda - O o
Mellone, or Mettone N *i*
Melloor - Z p
Mellypour - I y
Melpilly - T q
Memene - C t
Menadow - N *i*
Meadow - K k
Mentha - N *i*
Mentole - Z r
Meongow - N *i*
Meraudabad - E q
Merawaw - M *k*
Mereal - Q q
Mergui - W *l*
Merjapour - I x
Merjee, or Meerzaw T l
Merindapally - W p
Merritch - R l
Merlom - Q o
Merzapour - H t
Mesanah - K i
Mescinzungh - D z
Metaccona - O x
Methully - M h
Mettyconda - U o
Mettone, or Mellone N *i*
Metuperta - Y q

MEWAT - F n
MEWAR, the same as OUDIPOUR - H l
Middatour - S p
Midnapour - L z
Midnygunge - H t
Milapour - U p
Milaveram - R r
Mill Gaut - L o
Minday - P *b*
Mindowly - I t
Mindygaut - G r
Minrow - F p
Mirchour - S p
Mirgonda - Q o
Mirjanagore - L *b*
Mirzagunge - L c
Mirzapour - F s
Mirzapour - K *a*
Miserrepour - G q
Mitgaing - K u
Mittanpour - E p
Mittanpour - E q
Moaganore - R o
Mocaumpour - F x
Moddiguba - T o
Moddigong - M q
Moddel Bay - Z n
Modenore - R s
Mogulpour - D n
Mogulserai - G o
Mogulserai - H u
Mogulserai - I p
Mohady - M r
Mohanoo - I p
Mohaun - G r
Mohawry - I o
Moherry - O x
Mohgong - M s
Mohun - G s
Mohun - I o
Mohungur - H p
MOHURBUNGE M y
Moka - S o
Mokamo - I y
Mokontpour - G r
Molilla - U l
Mollam - Q t
Mollidon - F q
Molupatty - *A s*
Molodive - Z r
Molraizepollam - U r
Monaconda - Q q
Monasaha - F r
Monaserai - M u
Monattoo - I w
Monchaboo - L *k*
Moncah - H w
Moneer - H u

Monegal - R r
Mongalore - W q
Monghir - H y
Monglee - P o
Monglegarry - R r
Mongletore - R o
Mongopungoly - H m
Monguipatane - O m
Mongulcote - K z
Mongulhaut - H *b*
Mongumma - I s
Moniegur - P k
Monkeary - K w
Montchu R. - E *a*
Montour - H r
Montredy - O x
Monze Cape - I b
Moobad - G r
MOODAJEE BOONSLAH. Terrs. of N q
Moodpour - I c
Moodul - R m
Moogong - M r
Moogpour - K h
Moogry - P k
Mooker - Z p
Mooka - P l
Moonagurra - R p
Moonygurry - D p
Moorbad - O k
Moordampour - L o
Moorcah - E r
Moorgong - N q
Moorgul - Q t
Moorkya - L w
Moorshedabad - I *a*
Moorsoon - N w
Moorude - P m
Moor - H q
Mootachilly - X p
Mootagara - R q
Mootagonga - N r
Mootagood - Q q
Mootal - S p
Mootan - L o
Mootapaddy - Y p
Mootapilly - S r
Mootingy - R r
Mopar - S q
Morabad - G m
Moradgunge - G u
Moranker - O n
Morbidery - U l
Mordyseer - T l
Morcutgong - N o
Morgurry - T o
Mori - F t
Morimal - S p
Moro R. - F m

Moroucouna - X m
MORUNG - G y
Mosabad - G m
Mospony - *B* s
Mofselpatty - *A* r
Motecaze - L g
Moto - K i
Motoorah - L z
Mottapar - Z n
Mouah - M h
Mouah - X p
Moudyel - S p
Moulapuddy - Y p
Moular - X q
Mouler, or Saler-Mouler N l
Mount Dilla - W l
Mount St. Thomas W r.
Mour - Q *o*
Mourteah - E s
Mousanagur - G r
Moufiy R. - Q p
Mow - F q
Mow - H q
Mow - H u
Mow - H x
Mow - I p
Mow - I t
Mowah - G t
Mowah - H x
Mowee - L g
Mowgunge - I t
Mowamilladooru T r
Mowil-Gonga - *A* s
Mowley - O k
Muccapet - R r
Muchandergur - Q l
Muckraiz - L o
Muckundgunge - K x
Muddi - K e
Muderar - K f
Mudgurry - K w
Mudnagur - F t
Mugalnore - Y o
Mugdoompour - H z
Muggur - G u
Muglatore - R s
Mugtee - U p
Mugroor - N p
Mulangoor - Q p
Mulgom - N l
Mulhur*gunge* - H q
Mulkapour - Q q
Mulky - U l
Mullargur - I p
Mullawar - K o
Mullaow - L k
Mullickpour - L *a*
Mull*incota* - *A* o
Mulnapour - G u
Multo - F k
Mulygunge - H *g*
Mulygunge - G z
Mumbole - T q
Muncera - O l
Mundapum - Z q
Mundanagoody - R p
MUNDELLA, See Gurry Mundella.
Mnndella - L r
Mundu - L m
Mungar - L o
Munglapet - U q
Munky - T l
Munnypour - I *g*
Munsen - P k
Murcah - H s
Murchapour - N o
Murdgur - O x
Murfah - H s
Murgah - L s
Murgaw - H r
Murdgurry - U o
Murgloor - Q r
Murjatta R. - M *b*
Murlawaddy - W o
Muror - O q
Murreow - H t
Muscary - M f
Musmurreah - G q
Mufsaon - O i
Mustan - I *b*
Mustaphabad - H s
Mustara - S o
Mutbunny - G x
Mutchang - K *b*
Muttaharrow - M f
Mutteah - G w
Mutteary - G x
Mutty - L e
Mutuapollam - X q
Muxoodpour - I x
Myhie R. - K k
MYSORE - W n
Mysore - *ib.*

N.

Nabec - M *k*
Nabobgunge - F s
Nabobgunge - G s
Nabobgunge - G t
Nabobgunge - I *a*
Nabobgunge - H z
Nabusta - H s
Nadagong - N p
Nadamur - Y n
NADERBAR. This circar was formerly reckoned to Malwah, but now to Candeish. - M l
Naderbar - *ib.*
Nadgong - M q
Nadout - L k
Nadum - Y n
Nagacoil - R q
Nagalaveram - Z p
Nagar - F o
Nagartz - *C* c
Nagatch - Z p
Nagdam - P i
Nagemal - W n
Naggery - U q
Naggur - F s
Nagjuree R. - P n
Nagone - I r
Nagoordil - *A* o
Nagorbufsy - H x
Nagore - Y q
Nagore - F i
Nagowra - D p
NAGPOUR. Understood to be the same as BERAR. M q
Nagpour - *ib.*
Nagree - I t
Naid Chokey - U r
Naiserra - L k
Naladidy - Z p
Naldourouk - Q n
Nallacond - R r
Nammoo - M *k*
Namacul - X p
Nanamow - G r
Nancaseram - W l
Nander - O o
Nandenore - U q
Nandgeery - Q l
Nandigaw - R r
Nangenore - R l
Nandgom - N l
Nandouly - F p
Nandy-Allem - S p
Nandyol - H *b*
Nangu - T o
Nanzoo - M *k*
Napacar - *B* q
NAPAUL - E w
Nappa - L i
Naprum - I *g*
Nara - P p
Naracally - O n
Naradnconda - O q
Naraguntla - U q
Naraingaum - O l
Narangabad - E r

Narangur - L s
Narampour - K c
Narapilly - Q q
Narapilly - R q
Narcondam I. - U g
NARDECK - E m
Nardole - R s
Naredcotty - A n
Narenda - G m
Narhal - F n
Nariparidurga - T p
Narnalla - M o
Narnaveram - U q
Narnol - F n
Narrickee - F p
Narolly - M k
Narsapour - R s
Narsapour - U o
Narsapour - Q r
Narsapour - Q s
Narseray - F n
Narsingapatam - O y
Narsingur - L y
Narwah - H p
Narwur - N k
Nafsuck-Trimbuck O k
Natrudacotta - A p
Nattam - Y p
Nattore - I b
Nattrow - M k
Navara - Q m
Navalpera - O k
Navapour - U l
Naugamungulum U n
Naupent - S q
Nauphara - P w
Nautan - G w
Nautpour - G y
Nawit - M n
Nayé - Q l
Nayedapilly - T q
NAYRS - X m
Neatimery - A n
Nedligui - Q o
Neechinta - L x
Neechumaran - Y p
Neekalla - M l
Neelgur - M y
Neelgur - Q q
Neemear - F r
Neemdar - G o
Neermul - O q
Neeval - W q
Neevalour - ib.
Negapatam - Y q
Negapatla - U q
Negar Parker - I g
Negombo - B q
Negrais I. - S g

Negrais Cape - R g
Nehla - F n
Nehrwaleh - K i
Neimphy - K b
Nelevangole - U o
Nelgound - R m
Nelluram - W i
Nellembi - B r
Nellipilly. It lies about a mile and half to the east of Yanam - R t
Nellore - T q
Nelly - T m
Nemally - Z p
Nemaram - R q
Nemeagee - M k
Nemen - A o
Neminpilly - U p
Nemli - R n
Nengengood - W n
Ner - O n
Nerbuddah R. source L t
——— mouth M i
Nere - M p
Nereally - R n
Neriad - L i
Nesty - E y
Nevalcotty - C o
Newtya - H b
Newtya - R k
NEYBER - I h
Niagur - K y
Ningur - L t
Nialma - D x
Niana - Q o
Nicaracool - R q
Nicauar - A r
NICOBAR ISLANDS A f
Niddycorda - Z p
Nidjibabad - D p
Niewudge R. - I n
Nimboo - I x
Nimderra G. - O l
Nimilly - Q s
Nimgong - O m
Ningam - Q p
Ningapour - R m
Nimrana - E n
Ninghen - K a
Nipatore - W p
Nishanpour - H a
Nitchou R. - E c
NIZAM ALLY, Terrs. of, Q n
Nizambadda - P w
Nizampatam - S r
Nizampet - O m
Noanagur - L f
Nobutpour - H u

Noel Is. - Y i
Nogarcot - E y
Negong - I a
Nohotha R. - E y
Noka - H w
Nokeela - I b
NOMURDIES - H d
Noncovery Harbour A f
Noongola - H b
Noongotty - K t
Noony - I z
Noopour - M k
Noornagur - K d
Noorpour - K c
NORTHEN CIRCARS
P u
Norungah - I w
Nosapour - L o
Nosari - N i
Notchengong - N q
Nothowow - P b
Novanagur - N g
Noudjer - R r
Novigunge - F q
Nou Kian R. - F k
Nou - - F p
Nowadah - G r
Nowadah - I x
Nowadah - I y
Nowady - K w
Nowagur - I w
Nowagur - M t
Nowagunge - F t
Nowdya - H x
Nowlayé - K m
Nuapent - T q
Nuddeah - G r
Nuddeah - K a
Nuddere - N o
Nugara - H w
Nuldingah - K b
Nulhatty - I z
Nullaconda - R q
Nulla Sunera R. - I e
Nullua - L a
Nul-hi - I b
Nundeverum - T q
Nunkar - O p
Nunnore - H w
Nunparah - F s
Nunsaru - N i
Nurabad - G p
Nuraquimire - I e
Nurhun - G w
Nurjee - G f
Nurrah - M t
Nursingdy - K e
Nursingpour K q and K n
Nuserabad - M m

Nuſseratpour - N l
Nuſserpour - H e
Nuturee - T n
Nutwabara - K y
Nyarpet - U r
Nychinta - *H a*

O.

Oclifser - M i
Odeh - G o
Odeypour - L u
Odrour - P p
Ogendow - M *i*
Ogidoo - K x
Oister rocks - T k
—— island - O *e*
Oitong - C *e*
OKAMUNDEL - L e
Okerah - K z
Okilpour - I *a*
Okrah - I r
Oliapour - H *b*
Olizpour - P n
Olisi - S r
Olliya - L y
Ombergaum - P k
Omelloor - Z o
Omeree - I s
Omeree - N o
Omergong - N i
Omergong - N n
Omerpour - N o
Omilpallah - O o
Omita - L i
Omptah - L *a*
Omraulty or Amraulty N p
Oncha - H q
Onberga - P o
Ongergurry - O x
Ongole - S q
Onore - T i
Onyé - N k
Ooda Ootaly R. M o
Oodapour - K *d*
Oolandour - X q
Oolpar - M i
Oondapatty - O k
Ootgonda - R q
Oorey - H q
Oorgaum - O m
Ootanully - Y o
Ootimpaliam - Z o
Ootatore - X p
Ootcour - U o
Ooterawoody - Y o
Ootramalore - W q
Orangabad - F p
Oreyoor - Z p
ORISSA - N w
Oruenny - P n
Oſsara - L y
Oſsoorah - K z
Oſumpour - I *e*
Ottingbah - *I f*
Oudanulla - I z
OUDE - F s
Oude - G t
OUDIPOUR - I l
Oudipour - *ib.*
Oudgah - L x
Oudighir - P o
Ougein - K m
Ougly - S l
Ouioulinké - D *c*
Oulagunagore - X q
Oumary - N q
Ouple - P n
Ourgoor - R o
Ourigui - P o
Ouscotta - S m
Ouscotta - U o
Ouſoor - W o
Outapallam - X o
Outor - R l
Owlah, or Aonlah E q
Ouserah - I u

P

Paalavanke - Q *c*
Pacherry - *K b*
Pachete - K y
Pachore - H p
Pada - M w
Paddar R. See Puddar.
Padepatnam - Y q
Padlee - N k
Padongmew - O *b*
Padram - F x
Padreah - M i
Padshahpour - E o
Pally - Q l
Palnam - C b
Pairumbaucum - U q
PAISWAH of the MAHRATTAS, Terrs. of Q l
Palamcotta - *A o*
Palamcotta - X q
Palamerdy - Z p
Palamow - K w
Palapetty - Y p
Palatchy - Y o
Palavai - *B* q
Palavaseny - G l
Palcoor - *A o*
Palcote - L w
Palgunge - *I y*
Pathanpour - *I i*
Paliar R. - W r
Paliacar - Z r
Paliapado - W q
Paliconda - S o
Paliconda - W q
Paliconda - Z n
Palicaude*bery* - Y n
Palighery - T p
Palindi - Z n
PALL - K k
Palligoram - R q
Palmiras Pt. - N z
PALNAUD - R q
Palredygur - *ib.*
Paltré Lake - D *c*
Palvurya - F s
Palwail - E o
Pamada - O *i*
Pamandoor - *A* p
Pambu - D z
Pamnagur - I o
Pamodurte - T p
Panagur - K r
Panamgoody - *A o*
Panangoody - Z p
Panarcourchi - X q
Panatallah - L s
Pancawir - I m
Panchgong - O n
Panchpara - M u
Panderla - Z p
Pandoly - O k
Pandonser - P t
Pandoo - P *i*
Panere - *B* q
Paneture - *C* q
Paniany - Y m
Pankira - N l
Panlang - Q *i*
Pannah, or Purnah I r
Pannela (new) - R l
——— (old) - Q l
Pannolah - N l
Pannunah - M q
Pannyallum-*crutch* *A* p
Pansar - K i
Panshah - K *b*
Panwell - O i
Papanaud - Y q
Papamow - H t
Paracho - H p
Paracho*reecoil* - Y p
Paradanga - H *b*
Paragur Ruins - H p
Para*mboor* - Y p
Paramonsera - S p
Paramutty - X p

Parasaoll - P n
Paratella - R r
Parchoor - *ib.*
Pargow - H q
Paridrong, or Paridsong E *a*
Parkel - Q p
Parlagow - M n
Parlie - N i
Parmenalore - X o
Parnafsa - H t
Parnel - O l
Parone - Y m
Paropal - X p
Parpooty - S k
Parroah - *A* r
Parshepatnam - Z q
Pasroi - M i
Particotty - *A* o
Parur I. - Y n
Pasar - X p
Paſuawar - F o
Patada - O n
Patchwarry - I z
Patcoom - K x
Pategow - L o
Pateagur - R n
Pateeta - H u
Pateli, or Putala C *d*
Patenode - *B* t
Patgong - G *b*
Patinoor - Z p
Patmour - R p
Patna - H x
Patnoura - L p
Patokah - O n
Patou - *ib.*
Patoual - O m
Patree - L h
Patris - O n
Patrowra - I t
Patsah - K u
PATTANROHILLAS F q
Pattan - E x
Pattan - F n
Pattan - Q k
Pattancheru - Q p
Patteeah R. - C p
Pattergaut - F p
Pattergotta - H *e*
Pattergotta - I *c*
Pattergur - D p
Pattiad - L h
Pattiary - F q
Patticaut - Y n
Pattigam - P u
Pattun - K i
Patungah - M u
Pattyah - G q
Pauganary - Z p

Pawngaw - P n
Palarah - N q
Paulum - K n
Paunraw - K y
Paunraw - L y
Pavoor - *A* o
Paupakelly - Q r
Paupanaſsum - *A* o
Paupanaſy - Y q
Pawah - I x
Paytollee - E q
Peacee - G w
Peanjee - *P b*
Pearl Fishery - *A* p
Pecharee - I p
Pechowly - H p
Peddapatam - R s
Pedda-Balapour - U o
Peddagudemy - R s
Peddapour - Q t
Peddi-*Balabaram* U o
Pedeonaig - W p
Pedinaburam - *A* o
Pedman - R r
Pedrapalore - W q
Pt. Pedro - Z r
Peendabatta - M t
Peparool - F q
Peeply - N y
Peergaow - P l
Peernagur - F s
Peer Sheik's Tomb K d
Pegongnew - M *i*
PEGU - Q *i*
Pegu - P *i*
Peint - K k
Peint - N k
Peint Gaut - P k
Pelicare - Y n
Pelang - M *i*
Pelow - O *b*
Pelliconda - P u
Penat - G p
Penamoushily - R s
Penatoor - W q
Penawas - I n
Pendarty - S r
Pendown - N *i*
Penna - Q m
Pennar R. - T r
Penningonda - R s
Penomoxin - Y *l*
Penowal - H m
Penticotta - Q t
Penukonda - T o
Penutura - P w
Peny - I u
Peory - O n
Peperah - K r

Peploud - M n
Pera I. - *D l*
Peram I. - M i
Periamoody - Y o
Periapatam - W n
Periapollam - U r
Periacullum - Y o
Perinda - P m
Peringoody - Z p
Perivale - *ib.*
Permacoil - W q
Permera Rocks - U l
Pernelly - O o
Parnally - N k
Peroe - H w
Perour - T o
Perperengarde - X m
Perrone - G t
Persah - F x
Persah - K u
Persaim - R *g*
Persiah - O i
Pertabgur - H t
Pertabpour - L z
Perswar - I r
Petapolly - Q t
Petchneig - Z p
Petrabar - K x
Pettapolly - S r
Pettapour - K i
Pettapour - Q t
Petticotta - Y q
Peyaunny - F r
Peyjuree - I o
Pheer Furrid - N q
Phoory - N l
Pialapour - K *c*
Pialny - Y o
Pibigga - H x
Pigeon I. - Q u
Pigeon I. - T l
Pigeon I. - *A s*
Pilatla Paſs. It leads from the Carnatic, into Cuddapah, 17 miles south from Udegherri - T q
Pilleer - U p
P.llitheat - E r
PILNAUD. See Palnaud.
Pilwara - H l
Pimpelgong - K n
Pinagra - X p
Pindala - Q q
Pintral - S q
Pipars - G l
Pipelo - G n
Pipelgong - N l
Pipelgong - O m
Pipelnair - N l

Pipelpura - M k
Piperoone - G y
Piperry - N m
Pipley - N n
Pipley - O l
Pipley - M z
PIPLIAH *RAJAH* M k
Pippar - F t
Piprah P l, F q, and G t
Piprow - K o
PIRATE COAST Q i
Pirote - H p
Pitlaud (Guzerat) L i
Pitlawad-(Malwa) K l
Pitty R. - I c
Plaisey - K *a*
Pocherry - Z p
Podala - S q
Podana - R s
Poila - X m
Pointy - H z
Poka - G w
Poktoo - M *k*
Polaram - Q s
Policaud, or Palicaudchery Y n
Policole - R s
Pollay - H x
Pollay - L t
Poliput - U q
Polore - W q
Poly - Q k
Ponada - G l
Ponakelly - Q r
Ponaron - X q
Ponaveram - Y o
Ponda - S k
Pondicherry - X r
Pondimarka - Q u
Pongallah - R q
Pongedamy R. - K d
Ponlapilly - R p
Ponsah - I w
Ponziac - N *i*
Poodacotta - Y p
Pookarya - I *a*
Pook Padang - M *i*
Poolapauk - W r
Poolbada - P t
Poolgoury - Z o
Pooloo - R *b*
Poolponr - H t
Poolytopu - A o
Poon Gaut - L n
Poonacumada - Q s
Poonah - P k
Poo. amalee - U r
Poondy - P w
Poonkur - H *b*
Poor Bunder - M e
Poorub - G s
Poorundar - P l
Poorvah - G s
Pootgaut - E p
Pootlapaisa - Q q
Pootya - I *a*
Poppergaut - G t
Porcah - Z n
Porrogong - F *b*
Portonovo - X q
Porur - L p
Poſsella - K r
Poudingory - X m
Porvear - A n
Poulcotty - B n
Poulmady - S p
Pourimitaila - A q
POURONKE E *b*
Pourubcotty - B o
Powangur - L k
Poway - G t
Poway - I r
Prela - X l
Preparis I. - T *f*
Prone - O *b*
Providien I. - A s
Pryggee - Q *b*
Pubna - I *b*
Puccaseri - L z
Pucculoe - I *c*
Puckar R. - K d
Puddambally - N x
Puddampour - N y
Puddamtola - N w
Puddangarde - Y m
Pudnar R. - H k
Pudgdargong - M q
Pudicotta (Tondeman's residence - Y p
Pudicotta - X o
Puducaud - Y n
Puker - F k
Pulansa - I h
Pulka - L u
Pullecoil - Y q
Pullicate - U r
——— Lake - *ib.*
Pullumnare - U p
Pulyvellum - X p
Punchenee - G *a*
Pundipour - G t
Pundua - H *d*
Punganore - U p
Pungnam - I *g*
Punje - M o
Punjeree - I w
Punwary - H r
Purarya - E r
Purbutty R. - I o
Pureewar - F s
Puresil - P w
Purgatty - P u
Purgot - X n
Purgow - O k
Purki - I x
Purnah - I r
Purneah - H z
Purrongur - K p
Purrowniah - G w
Purruah - H *a*
Pursah - H w
Pursaummah - H y
Pursoyah - I w
Pursur - E r
Putala - C *d*
Putcabary - K *b*
Putelam - B q
Putemahry - K *a*
Puttan - O q
Puttan Somnaut M f
Putterahee - G q
Puttyram - H *a*
Putyajury - I *d*

Q.

Queaga - P *b*
Querkmi Pagoda S *k*
Quilon - A n
Quivisa - G w
Quondanga - O *i*

R.

Raajegur (Malwa) I n
Raat - H q
Rabnabad - L *c*
——— I. - M *c*
Racaisbone - O n
Rachol - S k
Rachour - L r
Rachour - R p
Rachoutre - T p
Radanagur - K y
Radawair - M n
Radegurry - W l
Radimpour - I h
Raepour - G q
Ragamme - C r
Ragogur - I o
Raguapour - F x
Rahny - H *a*
Rajacotty - B o
Rajacotty - B p
Rajagunge - I *e*
Rajagur - I w and L k
Rajahum - P u

Rajakeera - G p
RAJAMUNDRY R s
Rajamundry - Q s
Rajanagur - K c
Rajanagur - Q t
Rajapilla - T o
Rajapour - H p
Rajapour - R k
Rajapurum - X p
Rajesee - H p
Rajserai - D m
Raibaug - R l
Raidee - L w
Raidurgam - W q
Raje-Behtoo - B l
Rajbulhaut - L a
Rajeeata - M g
Rajegaut - M e
Rajegur - H o
Rajegur - F o and I r
Rajegur - L z
Rajehaut - K z
Rajemal - H z
Rajematchy - P k
Rajemungalum - A o
Rajgiri - Q p
Raigur - M u
Rajode - K m
Rajoorah - O o
Rajuapour - F w
Rajmalpour - Q l
Raimpour - F q
Rain - L e
Rajeeen - K o
Raitapour - Q s
Rakyporah - L u
Ralicotte - R n
Ramagirry - Y p
Ramanadporum Z p
Ramas Cape - S k
Ramaseram - R t
Ramchundra - M z
Ramcotty - C o
Ramdilly - W l
Ramdega - M w
Rameeapatam - S r
Ramenapilly - Q t
Rameseram - T p
Ramgary - Y n
Ramgaut E p and S l
Ramgonga R. - C q
Ramgur (Bahar) K x
—— (Guzerat) N k
—— (Malwa) I o
Ramgur - P q
Ramgur - F p
Ramgur - N w
Ramgurra - I p
Ramingam - P o

Ramiseram I. Z q
Ramisundrum U p
Ramnagur - G y
Ramoo - M t
Ramoury - L o
Ramootch R. C s
Rampah - Q t
Rampara - Q i
Rampicherla - R q
Rampour - E q
Rampour - F s
Rampour F w, G w, I m, I s, I u, T q
Ramseil - N k
Ramteak - M q
RANA, Terrs. of. See Oudipour.
Ranasagur - H w
Randeer - M i
Rangalore - P u
Rangematty - G c
Rangnya - L e
Rangapilla - W r
Kangasundrum - A o
Rangoon R. - R i
Rajgotpour - K y
Rankera - N n
Rankporah - I i
Rannee - M y
Ranny Bednore - S m
Ranuygoog - P l
RANTAMPOUR G n
Rantampour - *ib.*
Ranycotty - A n
Rannypookra - K y
Randeonda - R o
Raoutty - K l
Raperlah - S r
Rapty R. - F t
Raree - S k
Rasin - P m
Rafoodpour - F m
Rafoolpour - G q
Rate - T o
RATHORE RAJPOOTS, original country of H k
Ratsur - O o
Ratula - F t
Ratoly - H r
Ratwah - G p
Ratwah - K o
Rawllow - R q
Rawtty Dungaree M e
Raynangong - N i
Raypour - M t
Razula - M g
Reang - I *d*
RECCAN. The same as ARACAN. O g

Recumpada - Q s
Red Crab I. - M e
Redigoodam - R r
Redipatnam - Z p
Remal - G l
Remporetty - Z o
Renapour - P o
Rettinghery - T o
Rewah, or Rooah I s
Rewari - E n
Reyoor - R t
Ridolly - G p
Rimbu - C b
Rinaur - U p
Ripera - N q
Ritchel R. - I c
Rixi - K w
Roanpour - *Ie*
Roaragur - P k
ROCKAGE - B b
Rooah, or Rewah I s
Roodawn - F q
Rogonautpour - K y
Rohecta - G q
ROHILCUND - E q
Rohnd - K w
Rolepara - N w
Romaneah - U r
Romkera - P l
Roonay - I y
Roopnagur - G m
Roopgur - N k
Rosecotty - B o
ROSHAAN - L *f*
Rotas Gur - I u
Rounreak - Q *b*
Roufsarah - H y
Rowlee - F s
Rowrah - H q
Rowtee - D p
Roymatla R. - M *a*
Roymungul R. - M *b*
Roypour - I s
Roypour - L z
Ruanel - *B r*
Rubafs - F o
Ruguporam - Q p
Rujampet - P p
Rundulla - M l
Runga - P u
Rungpour - H *b*
Runneah - M n
Runnode - H p
Rurrow - G q
Ruthgur - M n
Rutlam - K l
Ruttagurra - K p
Ruttangur - O k
Ruttungunge - K *b*

Ruttunpour - L t
Ryacotta - W p
Ryalcherry - U q
Rydraire - X p
Rydroog - T n
Rynabad - L *b*
Rypour - G p

S.

Saapour - K *c*
Sabermatty R. - L i
Sabuly - K k
Sackerigurry - Y o
Sackymuny - T p
Sacrapatam - U m
Sacrapour - X q
Sacrifice Rock - X m
Sactagong - O m
Sacuda - M m
Saddamol - H *a*
Saderbele - N k
Sadi R. - E o
Sadras - W r
Saghordy - I *c*
Sagral - R o
Sagrally - P p
Sagor I. - M *a*
SAGUR - I q
Sagur - K p
Sagwarah - K k
Sahar - F o
Sahoor - F q
Sahrah - G s
Saibgunge - G *a*
Saikote - L l
Saipour - I t
Sailgong - N m
Sailoor - X o
Sakkar - R o
Saladun - P *b*
Salapour - O e
Salawatk - W r
Salbarry - M p
Salbey - H p
Salem, or Selim - X p
Salem-Mouler - N l
Sali - O o
Salimpour - G w
Saliom - X m
Salli - P o
Salloorgaut - P u
Saltumea - M *i*
Salon - X p
Salopar - A s
Salpha - P l
Salsette I. - O i

Sambarra - K p
Sambur - G m
——— Salt lake of *ib.*
Samiaveram - Y p
Sami-Ifsuram - T q
Samulcotta - Q t
Sanashygotta - G *a*
Sanashygunge - I *b*
Sancatty - P o
Sancatty - P p
Sandela - F r
Sandole - R r
Sandy - F r
Sandry - H m
* Sangada - H c
Sangalpilla - T p
Sangam - P p
Sangam - T q
Sangammdan - A n
Sanganeer - G n
SANGARIANS. - L e
Sangool - K o
Sangurry - U m
San - H f
Sankaaty - H *d*
Sankeira - K m
Sankerya - E p
Sankerydurgam - X o
Sanko - I *a*
Sanku - E x
SANORE - S m
Sanore-Bancapour *ib.*
Sanowly - F u
Sanparam - P w
Sanpoo R. - C z
Sanquelim - S k
Sanquem - *ib.*
Sansor - M o
Santa - I *b*
Santa *Bombally* - P w
Santapilly Rocks - Q u
Santasheeta - L *d*
Santerabarry - G *b*
Santhul - M h
Santipollam - Q u
Sanyangong - Q i
Saouly - Q l
Saoukera - B o
Saount - K k
Saourgam - O o
Sarandaga - K h
* Saranga - H c
Sarangpour - A r
Sarapilly - T q
Sarapilly - Q q
Sarhaut - I y
Sarlapally - T p
Sarmee - I z

Sarney - P n
Sarrowly - O i
Sarser - O o
Sarurpour - D o
Sarunna - I d
Sasanam - P w
Sasaw - L x
Saseram - I w
Sasnah - O s
Saswan - E q
Satanoor - W o
Satashygur - H u
Sateram - W n
Sattarah - Q l
Satilpour - I h
Satinagram - R r
Sattipalum - Q q
Satisana*gara* - Y p
Sattimungalum - X o
Satrum - Y p
Savendroog - W o
Saumapetta - U p
Saunkley - M m
Saurungpour - K n
Saurzah - F r
Sautgud - W p
Sawkul - O p
Sawpour - K o
Sawree R. - M g
Sayr - G w
Secundarah - E p
Secundarah - G r
Secunderpour - F o
Secunderpour - G w
Secundra - F q
Sedashygur - T k
Sedgwara - M k
Sedhour - T q
Seebgunge - H *b*
Seebgunge - H z
Seedly - F y
Seehurah - K r
Seekpour - H t
Seeor - K o
Seerka - K w
Seerpour - I *a*
Seerpour - I *b*
Seerpour - E p
Seerpour - H w
Seetacoon - L *d*
Seetrungee R. - M h
Segardee - Q p
Segwah - N i
Sehalour - U n
Sehwan - G f
SEIKS, Terrs. of C i
Selim, or Salem - X p
Selimabad - K *a*

Selimpour - K z
Selka - K u
Sellee - L k
Sellempour - G w
Seliiagur - F q
Selogoorar - N q
Selon - X q
Seminagur - E s
Senaparam - W o
Senaura - F k
Sengana - F n
Senke - E d
Sepaunagur - L o
Sepoory - H p
Sepou - F p
Sepra R. - I n
Septeng - C b
Sequeang - Q i
SERA - U n
Sera - ib.
Sera - K k
Serai - M l
Serampour - I y
Serampour - L a
Serapgunge - H a
Seray - I s
Seraya - G q
Sergode - U m
Sergom - O i
Sergour - U m
Seringapur - H q
Serineah - H z
Seringham - Y p
Seringapatam - W n
Sermatra - G o
Seronge, or Sirong - I p
Serour - P l
Serris - I w
Serrynautju - I l
Serwar - H o
Serwill - M u
Setapour - R o
Setlana - H k
Settiaveram - Q t
Setticulang - Z r
Seven Pagodas - W r
Severndroog - Q i
Seurah - H r
Sewalick Mts. - C o
Sewan - G w
Sewary - K u
SEWEE - E e
SEWEESTAN - G f
Sewnaddy - M t
Sewny - L r
Seyer R. - M t
Seyer Is. - A k
Seylone - G s
Sgigatche - C a

Shahbunder - I d
Shajehan - H x
Shajehanpour - F n
Shajehanpour - F r
Shajehanpour - G t
Shajehanpour - K n
Shainymalley - X o
Shambypatam - Y q
Shandamungalum - X p
Shangrapoy - Z p
Shapary - M w
Shapora - G n
Shasava - G p
Shask - O l
Shatoor - Z o
Shatore - ib.
Shatore - Z p
Shawabad - H o
Shawgunge - G t
Shawpour - K u
Shawpour - L p
Shawroah - I o
Shaye - L g
Shazadbary - E p
Shazadpour - I b
Sheally - X q
Shearpour - H c
Shearpoty - I w
Sheergur - F p
Sheergur H p and I o
Sheer Mohamed Pett R r
Sheerpour - E p
Sheerpour - F p
Sheevaya Malley - Y p
Shelopgur - W q
Shekoabad - F q
Shencotty - Z o
Shengana - ib.
Shetabava - Y q
Sheteru - X o
Shevagunga - U o
Shevgunga - Z p
Shevagurry - Z o
Shevaloor - Y p
Shevalpettore - Z o
Shevalpettore - Z p
Shevaporum - X m
Shiendamangaly - A p
Shingricunda - S q
Shionkan - Q i
Shionkan - R i
Shiron - C x
Shival - R n
Shiverapilly - P u
Sholaveram - Z p
Sholavenden - ib.
Sholingur - U q
Shoolarumboo - Y o
Shoray - I p

Shukera - A n
Shurdhur - L g
Sialacovy - Y n
SIAM, UPPER - O f
Siamodel - T q
Siandapada - W o
Sianelly - ib.
Siardehui - T q
Sibnibas - K a
Sicanderah - F p
Siccacollum - R r
Siccapilly - U o
Sickhery - G q
Sickhery - H q
Sicly gully - H z
Sidgur - O k
Sidoney - F r
Sidra - I w
Sieugur - L l
Sigavam - R p
Sihor - M h
Silah - I x
Silcolu - W n
Silhet - I d
Sillee - K x
Simar - G q
Simlee - L k
Simlya - N w
Simmooah - I t
Simogu - U m
Simulcandy - I c
Sinda - N k
Sindejua - F w
Sindkeerah - M l
Sinde R. on Indus - G f
——— (or Cally Sindy) I o
Sinder - O k
SINDIA MADAJEE,
Terrs. of - H o
Sindole - N u
Sindourcotty - A n
SINDY - I d
Sineer - O k
Singapetty - A o
Singarpetty - W p
SINGBOOM - L x
Singecollam - A o
Singeconda - S q
Singerbill - K d
Singeram - Q p
Singhore - H s
Singhole - K q
Singhya - H x
Singoonmaw - M i
Singpour - K s
Singramow - G t
Singrepatta - Y p
Singrecota - P o
SINGROWLAH - K u

Singum - Y p
Singur I x and P k
Sinkbazar - K y
Siocotticlay - *A s*
Siomaley - Z r
Siondelur - S q
Siondy - *ib.*
Sipa - E x
Sipeler - S r
Siri - E *f*
Siriagully - F x
Sirian - R *i*
Sirinagur - B p
Sirong, or Seronge I p
Sirowy - G l
Sirpy - U n
Sifsuar - H t
Sitanagur - P p
Sitang R. - Q *k*
Sitha - L g
Sitore - *A o*
Sitrigally - T n
Sittawaca - *B r*
Sitticote - P o
Sitticote - Q n
Sividurg - T o
Siumpour - L x
Skeveri - R l
Soane R. - I s
Soangur - M k
Soank - I y
—— River - M x
Soar - G y
Sofregam - *C r*
Sohagepour - K s
Sohaul - I s
Sohdah - *L x*
Solagur - I *d*
Sollapour - R o
Solo - E o
Solumbere - I l
Somainpour - H r
Somalpet - N o
Sombrere Channel - *B f*
Someer - G q
Sonah - I y
Sonehutch - K p
Sonepour - N u
Sonergong, or Sunergong K *c*
Soneyra - K n
Sonorya - H t
Sonymeany - H b
Soobarum - Q u
Sooe - I i
Soohagee - H s
Soolaram - R s
Soomgong - M q
Soonahatty - K x
Soonajura - I *d*
SOONDA - S k
Soongong - M q
Soonygong - L r
Soonwalla - M o
Soopour - H u
Soopour - K z
Soopour - F w
Soopa - P l
Soop*sundy* - Y q
Soorangur - M u
Soorapetta - R q
Sooreah - M t
Soorjew R. - A r
Soormah R. - I *e*
Soory - K z
Soorya - I y
Sooswargur - M u
Sooty - I *a*
Sorarum - Q t
Souananpour - Q p
Soundipour - I u.
Sourah - N n
Sourerah - O w
Sowree - L z
Sowrungy - O w
Sowray - I q
Suagra - G w
Suampett - Q p
Subulgur - G o
Subsagur - R m
Suckaltal - D p
Suckeree - I r
Suckree - L t
Suckry - K r
Sufferdam - P i
Sugoully - G w
Sujalpour - K n
Sujanhee - M y
Sujatpour - E r
Sujatpour - I *d*
Sujerma - G p
Sulsopour - G o
Sukesarai - I o
Sukor - F f
Sulapour - Q n
Sultanpour - G t
Sultanpour - H n
Sultanpour - M h
Sultanpour - Q o
Suman - F q
Sumbul - E p
Sumbulpour - M u
Sumdea - H *a*
Sumeer - M g
Sumifsor - F w
Sumnaut (Puttan) M f
Sunamooky - K z
Sunda - F s
Sundaminum - T o
Sundeep I. - L *d*
Sunder*agooda* - P w
Sunderbunds - M *a*
Sunderdoo - R k
Sunerampour - I *d*
Sunergong, or Sonergong K *c*
Sungwa - O l
Sungumnere - *ib.*
Sunkar - F f
——— River - L *d*
Sunkeera - M g
Sunkera - L k
Sunkerser - G x
Sunnam - D m
Sunnagur - M w
Sunund - L i
Supour - H w
Surajepour - F q
Surajepour - G r
Surajepour - G u
Surajepour - H s
Surajeeunjun - M o
Surajgurra - H y
Surat - M i
Surbilsah - K p
Surdah - I *a*
Surdah - M t
Surgoojah - K u
Surgool - R l
Surgurra - M u
Surigur - I u
Surkees - L i
Survopour - G t
Surow - M y
Surrool - K z
Surrowry - P o
Sursooty R. - M f
Surswutty R. - K i
St. Susan's Is. - Y *k*
——— River - Y *l*
Suseapour - H y
Sutahury - L *c*
Sutlone - H p
Sutrapour - M f
Swally - M i
Swamry - T n
Swedong - M *i*
Sydabad - F p
Sydabad - H t
Sydapour - T q

T.

Tacour - W o
Tacpoy - E *e*
Tadcul - W p
Tademeri - T o
Tadepatry - T p

Tadipoody - Q r
Tahej - K f
Taile R. - N u
Tainy - Z o
Taivaram - *ib.*
Takkacot - A r
Talamata - X n
Talconaw - H *b*
Talcote - *B r*
Talcote - S k
Talegong - O l
Talegong - P o
Taleporum - W m
Talgul - U n
Taligong - X p
Tallada - Q r
Tallapour - F s
Talsenghe - Q m
Tamach*abad* - H t
Tamana - R k
Tamba - Q k
Tamberchery - X m
Tambona - Z o
Tambray - Z n
Tamegam - *C r*
Tamlook - L z
Tamshuc Mts. - A s
Tanai - F w
Tancanchy - *A o*
Tanda - L l
Tandfa - K l
Tanda-Morgong - M r
Tangale - *C s*
Tangmew - O h
Taniala - R q
Tanichi - Y p
TANJORE - Y q
Tanjore - *ib.*
Tankia - D z
Tankunny - N o
Tanna - O i
Tanore - Y m
Tanygong - M q
Tapoor - X p
Taptee R. - M l
Tarabad - N l
Taragupala - P p
Tarauko - I y
Tarapelly - X o
Tarnavay - Y n
Taringasong. - E *e*
Tarours - O q
Tarrapour - H y
Tarrapour - L m
Tarsah - M r
Tartalla - Y n
Tartoor - Q u
Tarwas - *I b*
Tasapan - *A l*

Tasgom - Q l
Tasasudon - *F b*
Tatapury - *A p*
Tatapatnam - X p
Tatennagur - X q
Tatta - I d
Tattamang*alam* - Y n
Taudeconda - Q p
Taudeconda - Y p
Taujepour - G w
Taujepour - H *a*
Taule - W o
Taunda - G t
Taunnah - G r
Tavai - T *l*
—— Island - W *k*
Taya I. - *B l*
Tearpour - E q
Tecona - T k
Teecha - L *b*
Teek Forests in Pegu O *b*
—— in Gofcunda Q s
—— in Baglana O i
Teenah R. - Q n
Teen Tallaw - L k
Teestah R. - F z
Teetbaddy - I *c*
Tehoudsong - F i
Tekeree - M o
Telecooty - P u
Tellicherry - X m
TELLINGANA P p
Tellipoly - Z r
Telwara - I k
Tenaſserim - X *l*
Tengapatam - *A o*
Tenou - X q
Tentamoody - R t
Teoly - G p
Tepten - C *a*
Terecol - S k
Tergarry - U m
Ternally - T o
Ternalla - *ib.*
Terrapour - O i
Terriagully - H z
Terriah - E q
Terrim*angalum* - X q
Terriore - X p
Tefsuah - E q
Than - L g
Thauwaty - O i
Theang - N i
Thegam - F x
Thelary - H x
Thenongown - M k
Theva*courchy* - X p
THIBET - B y
Thongton - N i

Thora - H n
Thotra - G n
Tiagar - X q
Ticadee - M s
Ticoleah - G w
Tickarry - I w
Tickely - P w
Tierdil - R m
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R.

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Rampour - f 13
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Roopour - e 12
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Seekri - c 8
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Sultanpour (Lahore) c 7
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Tandra, or Alimorad f 7
TANOUL - c 7
Tareekab - b 5
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Teerandazee - c 2
Tehaureh - f 11
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U. V.

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Z.

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FINIS.

MEMOIR

OF A

MAP OF THE PENINSULA OF INDIA;

FROM THE LATEST AUTHORITIES:

EXHIBITING

ITS NATURAL, AND POLITICAL DIVISIONS:

THE LATTER, CONFORMABLE TO THE

TREATY OF SERINGAPATAM, IN MARCH, 1792.

WITH OBSERVATIONS

ON THE POLITICAL AND MILITARY ADVANTAGES THAT MAY BE DERIVED FROM THE NEW CESSIONS:

AND

AN ACCOUNT OF THE SITE AND REMAINS OF THE ANCIENT CITY OF BEEJANUGGUR.

By Major RENNELL.

How to ensure peace for any term of years, is difficult enough to apprehend. Will human nature ever cease to have the same passions, Princes to entertain designs of interest or ambition, and occasions of quarrel, to arise? May not we ourselves, by the variety of events and incidents which happen in the world, be under a necessity of recovering towns out of the very hands of those, for whom we have taken them?

SWIFT'S CONDUCT OF THE ALLIES

LONDON:

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FOR THE AUTHOR: AND SOLD BY G. NICOL, BOOKSELLER TO HIS MAJESTY, PALL-MALL

1792

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THE chief object of this publication, is to explain the present state of the political Geography of the Peninsula of India; together with the advantages that may be derived from our territorial acquisitions, made under the late Treaty of Seringapatam. The requisite information has been drawn from materials produced by the late war: and which enable us to describe the true figure of the Table Land (or BALAGAUT-CARNATIC); and the boundaries of the territories ceded to the Allied Powers, as well as of those remaining to Tippoo Sultan. The quantity of new materials already brought to Europe, is so great, as alone to warrant an entire new construction of the geography of the Peninsula: but it also became *necefsary*; in order to describe with effect, the cefsions made by Tippoo, to the Mahrattas and Nizam: for these occur in that part of the geography which has hitherto been very imperfect. A new construction has therefore taken place; and the form and dimensions of the Peninsula, have undergone some alteration, in consequence.

The scale of the present Map, which is only two thirds of the former one, is supposed to be fully adequate to the purposes of expreſsing the several particulars, required for the illustration of the general politics of the country; the scope of the operations of the late war; and the new boundaries, as settled by the treaty of Seringapatam, in March 1792. Had the scale of the former map been adopted, which could no otherwise be neceſsary, than for the purpose of introducing the detail of it, into the present one; a very considerable interval must have elapsed before it could have been

presented to the public: whose curiosity being at this time awake to the subject, may perhaps, be more usefully gratified by receiving *correct general ideas* at the present moment, than by a more detailed account at a future period. Besides, those who may be already in poſſeſsion of the former map, will find it retain its former use, in the south Carnatic, and in the southern part of the Peninsula, in general; for the trifling error in the difference of longitude, between Madras and Cape Comorin, does not render that part of the map leſs useful for ordinary references. And the same may be said of both the sea coasts.

Some of my readers may, perhaps, think that I have entered too much into detail, concerning the ancient division of the Peninsula: however, it appeared to me, to be more convenient to describe it in the Memoir, than in the Map: for had it been expreſsed on the Map, it would have been to the disadvantage of the matter, that ought to preſs more immediately on the reader's notice; by rendering it leſs clear and intelligible. And the notices concerning the conquests, partitions, and transfers of territory, could not well be omitted; because they lead the reader more immediately, to the knowledge of the relative connexions and dependencies, of the several provinces of the Peninsula; previous to the Mysore conquest.

As the late visit of Lieut. Emmit, to the ruins of the ancient city of Beejanuggur, the capital of the last Hindoo empire in the Peninsula, appears to furnish some curious particulars respecting a place that was little more than known to us by name, during the time of its existence; and has since been consigned to oblivion; I thought those particulars might be acceptable to the public; and not out of place, either, considering the subject matter of the Memoir. I have also added some historical facts, in explanation; one of which will explain the apparent reason of Tippoo's reserving to his sovereignty, the district of Annagoondy; situated within the tract ceded to the Nizam.

I shall now proceed to describe the manner in which I have endeavoured to illustrate, by the use of colours, the particular objects of this publication; which are:

First, a clear discrimination of the present boundaries of Tippoo's territories; and those of the cefsions made by him, to the British, and to their allies in the late war, the Mahrattas and Nizam: and

Secondly, an exposition of the advantages resulting from the arrangement and combination of the several posts on our new frontier towards Tippoo; considering that frontier as made up of the territories of three powers; namely, the British, the Nabob of Arcot, and the Rajah of Travancore: since the state of mutual protection and dependency subsisting between them, blend their respective territories into one mafs, in the view of foreign politics. This being the case, the common frontier of these confederated powers, should be considered as belonging to one and the same state; and, of course, be distinguished by one common colour; in order to ascertain its general bearings, on that of Tippoo. Without this afsociate idea, no adequate judgment can be formed, of the value or use of our new acquisitions: for taken independent of any connexion with the Carnatic and Travancore, the new acquisitions appear to be insulated and surrounded by other states: but if properly considered, they are a part of the great mafs of territory, united under the description of THE BRITISH POSSESSIONS AND ALLIANCES. Therefore, this mafs of territory has its *exterior* frontier, or that opposed to Tippoo and the Nizam, marked by a continuous RED line; which is also bordered on the side of Tippoo by purple, and on that of the Nizam, by orange. By this method the whole frontier appears in a geographical view, like that of a single state; which, as we have said before, is virtually the case.

The subdivision of this mafs, is as follows:

The British acquisitions from Tippoo, are marked on the interior boundaries, by DOTTED RED LINES: but their former pos-

sefsions in the Guntoor Circar, and in the Jaghire, are left *uncoloured*; to prevent their being confounded with the new ones.

The territories of the Nabob of Arcot, and of the Rajah of Travancore, are marked with YELLOW, within the red line of the exterior boundary: which yellow line also denotes, of course, the ancient frontier of our pofsefsions and dependencies in the Carnatic and Travancore.

The acquisitions of the Mahrattas, and the Nizam, are severally distinguished by GREEN, and by ORANGE: of which the *dotted** part marks the former boundary of Tippoo: and, of course, the former boundaries of the Mahrattas and Nizam towards Tippoo, may, from circumstances, be deduced from it. And the *continuous* lines, shew the present boundaries of these powers, towards Tippoo.

The new boundary of Tippoo Sultan, is marked by a PURPLE line: and it is obvious, that if we add to the territories included within it, the tracts, whose extremities are marked by dotted lines of red, green, and orange, we gain a complete idea of his original territory.

The above colours are those which have been severally appropriated to the same states, in my Maps of Hindoostan, and the Peninsula: but with the addition of the red line, *here*, to mark the collective frontier of the British pofsefsions and dependencies.

* The dotted purple line near the Kistnah river, is explained in the course of the Memoir, page 10; and has no immediate reference to the present subject.

December 7th, 1792.

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OF T
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SECTION I.

Construction *of the* Map *of the* Peninsula *of* India.

IT is foreign to my intention to enter into a minute discussion of the whole geographical construction of the map, or of a particular description of the several materials employed in it; contenting myself with stating, as briefly as possible, the manner in which the principal outlines and dimensions were determined.

As it is not known whether the distance between Seringapatam and Cannanore, (on the Malabar coast) in the sketch drawn by Capt. Reynolds, and sent home by the Marquis Cornwallis, in the last dispatch, was actually measured; we are still left in a state of suspense concerning the true breadth of the Peninsula, in that important parallel. I am however, strongly inclined to believe that it was measured; because it seems likely that Captain Reynolds (whose zeal for improvements of every kind is known) had an opportunity of doing it: and because his representation of the distance, differs, in some degree, from all the former accounts of it: to which may be added, that his result agrees nearly with the computation of the land marches; and with Capt. Huddart's longitude. For the distance arising on a computation of the mean length of General Abercromby's marches, differs from Captain Reynolds's sketch, 3° 45″ of longitude only: the computation being so much less, than the sketch gives: the one giving 1° 18′ 30″, the other 1° 22′ 15″, difference of longitude, between Seringapatam and Cannanore.

Seringapatam is placed by Capt. Beatson's measurement from Madras, at 3° 34′ 30″ west of that place: and reckoning Madras, at 80° 25′, as in my former map,* Seringapatam should be in longitude 76° 50′ 30″. Its latitude is 12° 26′. If then we subtract from the longitude of Seringapatam, the difference of longitude above expreſsed, we shall have for the longitude of Cannanore, 75° 28′ 15″, according to Capt. Reynolds's sketch; 75° 32′, according to the computation on the marches; or for the mean of the two (as we are not certain that the distance was measured), 75° 30′.

Capt. Huddart, makes the longitude of Cannanore by chronometer, deduced from Bombay (and the account closed to Bombay again) 75° 27′; taking Bombay at 72° 54′: or 75° 29′, taking it at 72° 56′, as some later accounts make it. † So that the accounts of the longitude agree very well, in a general view, with the lines drawn acroſs the Peninsula from Madras. In my former maps, I adhered to Capt. Howe's report of the longitude of Bombay: but the accordance of the present materials, ought, I think, to decide the matter in favour of Capt. Huddart's observations and deductions.

The present construction is also very materially improved in its outline, by Capt. M'Cluer's tracing of a great part of the Malabar coast: and by Mr. Topping's actual measurement of the Coromandel coast, between Madras and Point Calymere. Capt. M'Cluer's observations extend from Zyghur (or Jyeghur) to Carwar, in a continued line. Also from Mount Dilla to Mahé; and from Cochin to Anjenga: the remaining parts were left unexamined, because of the then state of hostility with Tippoo. Part, however, of this defect, is supplied, between Merjee and Cundapoor, by Capt. Reynolds's survey, in 1781: ‡ so that an extent of about 360 miles, out of 570, between Zyghur and Anjenga, has been explored.

* See Memoir of Map of Hindoostan, 2d edition, page 9.

† Here it is neceſsary to remark that Capt. Huddart's observations go to Mount Dilla only, which he places in 75° 16′, and Cannanore is 11′ to the eastward of it, by Captain M'Cluer's chart.

‡ See the same Memoir, page 28.

Mr. Topping's survey of the coast of Coromandel extends about 3 degrees of latitude between Madras and Point Calymere. The result shews that the latter lies about 4 minutes farther to the west than the former map, allowed. This, however, occasions so little difference, in the detail of the geography of the Carnatic, that for ordinary occasions, the old map retains its former use, in that part.

The remainder of the Coromandel coast, northward, was traced cursorily by Capt. Ritchie; and its general position was determined by Col. Pearse's line. (See Memoir of Map Hindoostan, pages 10 and 12.)

Between point Calymere and Anjenga, we remain in our former state of uncertainty; that part being copied from the last map; save in the short interval between Anjenga and Cape Comorin, which difference of longitude, I have lessened by 8 minutes.

The present map has in its interior part, a sufficient quantity of new matter to adjust the positions in general, through a principal part of the tract, between Chittore and Cannanore, on the east and west; and between Chinna Balabaram and Dindigul, on the north and south. Most of this has been obtained by actual survey and measurement; executed by Capt. Beatson, and Capt. Allan; and is the immediate offspring of the late war in the Peninsula. Much other matter, though not so correct in its nature, has been obtained by cursory observation and enquiry: such is the course of the south branch of the Cavery river; which is ascertained to spring from the Coorg or Coorga country, and to pass by Siddapour.* The extent and form of the Coorga and Nayre districts, are collected from documents transmitted by the Marquis Cornwallis.

The junction of the Toom and Buddra rivers, which form the greater river Toom-buddra, is ascertained by reference to the me-

* For this particular as well as some others, I am indebted to the obliging communications of Major Dirom, of his Majesty's 52d regiment. His History of the Marquis Cornwallis's last campaign, now in the press, will probably render the geography of the tract now before us more interesting than any endeavours of mine can render it.

morandums of Major Dirom, to take place at Hooly-Onore, about 20 miles to the northward of Bankipour; and the particular course of this river, between Hurryhur, and Seergoompty, in the neighbourhood of Adoni; is from a survey taken during the war, by Lieut. Emmit of the Bombay Establishment. The remainder of its course, and place of junction with the Kistnah, is from Capt. Beatson's map of Coromandel, &c. drawn and transmitted to the Court of Directors of the East India Company, in 1789. This valuable piece of geography, which we shall often have occasion to quote, contains materials for correcting a considerable portion of the course of the Kistnah river. It has accordingly undergone very considerable alterations, in the part between Condapilly and Merritch, in the present map. Capt. Beatson's survey of the Palnaud district, &c. neceſsarily included that of the Kistnah, to a point, more than 90 miles above Condapilly. Thence to Sooropour, or Solapour, is from authorities collected by Capt. Beatson; and from this point, to that where Capt. Reynolds left the Kistnah, near Merritch, is drawn from M. Buſsy's map, as far as it goes (that is, to the junction of the Malpurba river,) and beyond that, according to Capt. Reynolds's ideas, expreſsed in his map of 1784, and in his present sketch. It must however, be observed, that although I borrowed *the particular form of its course*, as above, from Capt. Beatson; yet the *direction* of it, above the conflux of the Beemah river, is changed from E N E to East, agreeable to certain notices, obtained since Capt. Beatson's work was compiled. This part of the map being still very imperfect; and yet, as the construction of it (such as it may be) must serve to regulate our ideas both of the *late* and *present* extent of Tippoo's dominions; and, of course, of the extent of the new Ceſsions; it appears indispensibly neceſsary to enter into the detail of its construction.

It must be observed, that, as the latitude is wanting all the way acroſs the Peninsula, from the western extreme of Palnaud, to Darwar; we can only approximate the parallel, by the application

of reputed distances, from certain known points on the south: nor can any use be made in this way, of Lieut. Emmit's measured line of near 100 miles, between Chitteldroog and Seergoompty; because (as far as our knowledge goes) it is unconnected with any of the southern positions.

Adoni is a point situated nearly in the middle of the Peninsula, and was adjusted in the memoir of 1788 (pages 285 and 287), at 98 Carnatic cofses, or 157 G. miles, west of Ongole: and being 11 journeys from Seringapatam, through Gooty, it was placed in the latitude of 15° 36′; that is, very nearly in the same parallel with Goa and Ongole. But now, finding that I took Seringapatam at too high a parallel, by about 5 minutes, I have reduced Adoni, to 15° 31′; and have the satisfaction to find, that both Capt. Beatson and Capt. Reynolds, place it nearly in the same parallel; that is, from 15° 27′ to 15° 36′. This then, is the first point on which we rest, for determining the northern boundary, and the position of the Kistnah: for Rachore (or Rychoor) lies nearly north from Adoni, at the distance of $28\frac{1}{2}$ G. miles; and the Kistnah is 5 miles beyond Rachore. And the conflux of the Beemah with the Kistnah, is directly N of Adoni, 36 G. miles distance. These last particulars we also collect from Captain Beatson.

Gooty is then placed at 34 G. miles S E of Adoni; being 2 journeys from it, in that direction (see Memoir of the Map of Hindoostan, p. 285;) and by Capt. Beatson, 20 cofses, or about 32 G. miles. In this position, it stands in lat. 15° 7′.

In the next place, we approximate the positions of Chitteldroog and Darwar, in respect of Seringapatam and Merritch (the latter being a point formerly placed by Captain Reynolds, in respect of Bombay and Poonah): and then laying off Mr. Emmit's line from Chitteldroog to Beejanuggur (corruptly called by Europeans, Bisnagur), we find the latter accord very nearly with Capt. Beatson's idea of its bearing and distance from Adoni. This is conclusive enough, in a general view; but Darwar is rather too loosely placed

in respect of Chitteldoorg and Merritch; though we have Capt. Reynolds's authority (in his late sketch) for supposing that Darwar is very near the parallel assigned it. The following is the *data* for the *primary* positions of Chitteldroog, Darwar, and Beejanuggur; as well as for the secondary ones of Hurryhur, Ranny-Bednore, Gocock, Kopaul, and Annagoondy; and the courses of the rivers Malpurba and Gutpurba.

Chitteldroog is given at 70 cofses from Seringapatam;* and Darwar at 150 road miles, or 75 cofses from Chitteldroog.† These 145 cofses, of the Carnatic standard, are supposed equal to 232 G. miles; ‡ but as Chitteldroog lies about 30 miles to the east of the line, the angle may shorten the distance 8 miles, and then 224 is the given distance. Darwar is said to be somewhat more than 30 cofses, east of Goa; § say 52 G. miles: Capt. Reynolds allows 60. A mean of the two, 56, places it directly south of Merritch; which, as we have said, is a point given by Capt. Reynolds, who traced the whole road from Bombay through Merritch, to Tippoo's frontier, in 1784.

Capt. Reynolds in his late sketch, places Darwar 2 minutes S of the parallel of Goa, which is reckoned to be in lat. 15° 29′. The 224 miles from Seringapatam, intersect the 56 from Goa, at 6 minutes, N of Goa, or 8 different from the parallel afsigned it by Capt. Reynolds: and at 79 S of Merritch; 68 S a little west from the point where the Bombay detachment appears to have crossed the Kistnah, in its way to Darwar: this being also a point in Reynolds's route.

Concerning this last interval of distance, our accounts are not

* This and many other particulars of the same kind, we derive from letters written from the Bombay detachment by Major Frederick, and Capt. Little; and printed in the Bombay newspapers of 1791. The particular in question is in the Bombay Gazette of May 23d, 1791.

† Idem.

‡ According to the scale of Carnatic cofses, 37½ to a degree. See Memoir of Map Hind. page 5.

§ Bombay Gazette of October 6th. When the detachment was 3 miles W of Darwar, Goa was said to be 30 cofses distant.

so accurate, as we could wish: the following are the only details I have met with.

The Gutpoorba river was crofsed 23 or 24 road miles S of the Kistnah: * and Col. Frederick reckons 74 more to Darwar. † The sum of these distances, 97½, reduced to horizontal distance, will be about 72 G. miles.

Another account ‡ states, that Gocock is about 24 cofses N of Darwar: equal to 39 G. miles: and Captain Reynolds's map of 1784, gives 28 G. miles between Gocock and the Kistnah: of course, this account gives 67 only. Another way of stating it, is, Gocock 24 cofses from Darwar or 39 G. miles; the Malpurba river 23½ from the Kistnah, or 18 G. miles; and Gocock 10 G. miles from the Malpurba, in Reynolds's map: total 67 as before. These accounts corroborate the statement of the distance between the Kistnah and Malpurba rivers, in Capt. Little's letters: but no positive information has reached me, concerning the actual distance between the Malpurba river and Gocock.

Taking then 70 G. miles as a mean of the different accounts, and intersecting it with 56 from Goa, as before, to gain the position of Darwar, it falls only 2 miles to the south of the point given by the computed distance from Seringapatam. It may be said, then, that the computed distances agree better with the interval of space on the map, than could be expected from such kind of materials.

Chitteldroog, which has been taken at 70 cofses || (equal to 112 G. miles), from Seringapatam, appears also in the map communicated by my friend Mr. John Sulivan, § at 61 G. miles N E of Simogu; 33 W N W from Sirpy. Sirpy is said to be 25 leagues ** W N W of Chinna-Balabaram, equal to 65½ G. miles; to which, if we add

* Bomb. Gaz. of Sept. 22d, 1791.

† Calcutta Monthly Register, for February 1-91.

‡ Bomb. Gaz. Sept. 22. In Capt. Little's letter of the 2d September, the Malpurba river was said to be 25 miles from Gocock, and 10 or 12 cofses from Darwar.

|| See the last page.

§ See Mem. of Map Hind. page 267.

** The Modern Universal History, Vol. VI. pages 66, 67, 68, and 69, gives several distances

33, Chitteldroog by this account, should be 98½ G. miles W N W or N W by W, of Chinna-Balabaram. Admitting that Sirpy lies in a direct line between Chitteldroog and Chinna-Balabaram, the two lines of distance from the latter, and from Simogu, overlap each other about 6½ miles: but being better satisfied with the truth of the position of Simogu, than of Sirpy, I prefer the line of distance from the latter; shortening it 2 miles, because there appears an indication of excefs, in both. Chitteldroog will then stand in latitude 14° 6′, and will bear from Seringapatam N 13¼ W; from Bednore E 12½ N.

We shall now examine how far the position of Beejanuggur, in respect of Adoni; deduced from Lieut. Emmit's line of distance from Chitteldroog, northward; agrees with Capt. Beatson's ideas.

Mr. Emmit's chain of bearings and distances from Chitteldroog through Hurryhur, to Beejanuggur (under the name of Allpatna), gives N. 7° E, 69½ G. miles; which will place the latter in latitude 15° 15′, and at 43 G. miles in a W S W direction from Adoni; according to the position afsumed on the authorities quoted in page 5 of this Memoir. Now, Capt. Beatson in his map of 1789, places the ruins of Beejanuggur W 27 S 45½ G. miles from Adoni; which differs only 2½ in the distance, and 4½ degrees in the angle of bearing: and as it is evident that his bearings on the west of Rachore deviate too much to the south, this error would neceſsarily extend itself to Beejanuggur. But the difference of the two results, is so small, as to occasion a difference of 4 minutes only, in the parallel; which is not to be regarded in disquisitions like the present: and we may therefore conclude that the positions of Darwar, Chitteldroog, Adoni, Beejanuggur, and Cummum, are rightly determined in respect of each other, and of Seringapatam, and Goa: consequently, that the late frontier of Tippoo on

in leagues between places in the Peninsula; many of which, from our own knowledge of their relative positions, are consistent; taking for a scale, the leagues at 23 to a degree, on a comparison with certain known distances.

the north, as well as the extent of the new Cessions, may be delineated with general accuracy, by means of these positions.

With respect to the inferior geographical points, on which the distribution of the space, the general courses of the rivers, the lines of boundary, and the limits of the Table Land (or Balagaut) depend, throughout the northern part of the Peninsula, the following is the detail.

Tippoo's ancient frontier towards Merritch, was at 3 cosses S of the Malpurba river; or 9 N of Darwar. *

Moodgul is given at 40½ G. miles N of Annagoondy on the Toombuddra river; † and Annagoondy is 2 miles N or N W of Beejanuggur; ‡ and the Kistnah is 10 to the N of Moodgul, or about 52 from Beejanuggur. The Kistnah is said to be 22 leagues from Beejanuggur, equal to 57 G. miles; § and by its course in Busby's map, it appears probable. Tippoo's former boundary lies from 13 to 15 G. miles N of Moodgul, in Beatson's map, and in Reynolds's sketch.

On the S and S E of the city of Adoni, where alone, for the space of about 28 miles, Tippoo's boundary has undergone no alteration, from the cessions made to the Mahrattas and Nizam; the said boundary is described to be from 10 to 11 miles S of the parallel of Adoni, in the beforementioned map and sketch.

With regard to that part of Tippoo's former boundary, comprized between the last mentioned part, and the south bank of the Kistnah, near Palnaud, I have adhered strictly to Capt. Reynolds's sketch. It appears however, by Capt. Beatson's map, which was constructed in 1789, that Tippoo's boundary *then* ran on the south of Nandyal, and east of Autcoor, as described by the dotted line of

* Bomb. Gaz. 15th Sept. Darwar was 12 cosses from Manouly or Nanowly; and Tippoo's frontier was 2 or 3 cosses S of Manowly. And Gocock was 15 cosses from the frontier, in Gaz. 15th Sept.

† Reynolds's sketch of 1792.

‡ Lieut. Emmit's letter of Nov. 5th, 1791; communicated by my friend Capt. Kirkpatrick.

§ In Universal Hist. Vol. VI. p. 69.

purple, in the present map: but concerning this matter, I have no farther knowledge than what is furnished by the map and sketch, in question. If Capt. Beatson is right, the Nizam's acquisitions in this quarter, are leſs than Capt. Reynolds describes them to be: but the reader will please to observe, that this difference of opinion, reſpects only the *former*, not the *present*, boundary of Tippoo's poſſeſsions, towards the Nizam.

Canoul and Rachore (or Rychoor) whose positions were not clear to me, when I drew the last map, * appear in the present one, conformable to the ideas of the two gentlemen, so often quoted; Canoul being about 83 coſses from Ongole; 59 from Cuddapah: 28 from Adoni; or 133, $95\frac{1}{4}$, and 45 G. miles from those places respectively. And Rachore is about 28 G. miles N, a very little E from Adoni; 38 W, northerly, from Canoul. † This poſition of Rachore does not differ materially from Capt. Little's report, ‡ which allows it to be 80 coſses from the croſsing-place of the Kistnah, near Merritch and Ryebaug; or about 128 G. miles: and on the construction, it is $134\frac{1}{2}$. If then, we add the several numbers of miles 133, 38, and 128, the respective distances between Ongole, Canoul, Rachore, and Capt. Little's station on the Kistnah; we have an aggregate of 299 for the number of miles of reputed distance between Ongole and the croſsing-place of the Kistnah; and on the map, the space will be found to measure 294, through the points of Canoul and Rachore: a convincing proof of the accordance in the groſs, of the computed, with the aſsumed distance, on the map.

The distance of Cuddapah from Nellore, (a point in Col. Pearse's line) rests on the authority of some documents published by my friend Mr. Dalrymple, in the Oriental Repertory; and bearing the names of Colin Mackenzie, and W. Lennon, engineers, the date, 1788. By these it appears, that Cuddapah is 61 G. miles, west, somewhat

* See Mem. of Map. Hind. p. 286. † Capt. Beatson.
‡ In Bomb. Gaz. of August 25th, 1791.

north, from Nellore: and being 34 leagues * to the N E of Chinna-Balabaram, through Gumipaleam, I allow 89 G. miles, which meeting the 61 from Nellore, places Cuddapah in lat. 14° 33'. The positions of Ganjecotta, or Gandecotta, and Tadepatry, are then fixed according to their proportions of the space between Cuddapah and Gooty, in Mr. Montresor's map; † Gooty having been already placed in reference to Adoni, page 5 of this Memoir. This determines the lower part of the course of the Pennar river; and the upper part rests on the distribution of the distance between Gooty and Chinna-Balabaram. Tippoo's present boundary is then laid off from Cuddapah, Ganjecotta, and Gooty, according to Capt. Reynolds's sketch.

We collect the general position and direction of the present boundary of Tippoo, towards the Mahrattas, as well as the Nizam's western acquisitions; by the positions of Belhary, or Balhary, Annagoondy, Kopaul, Ranny Bednore, and the course of the Toombuddra river, below the latter place.

Balhary, situated about 6 miles to the northward of the new boundary, common to Tippoo and to the Nizam, is given by Capt. Beatson at 17 cofses, or 27 G. miles, to the S W of Adoni; 21 G. miles eastward of Beejanuggur; and 43 west of Gooty.

Kopaul is situated about 22 G. miles to the westward of Beejanuggur, ‡ and Bahaderpour 1¼ to the S E of Kopaul: these places forming the frontier of the Nizam's newly acquired territory on the west, towards that of the Mahrattas, in the Dooab; and Goojindergur, situated 9 cofses to the N N W of Kopaul, is, on the other hand, the Mahratta frontier post towards the Nizam.

Ranny-Bednore on the east side of the Toombuddra river, is said to be 22 leagues (or 60 G. miles) to the west of Beejanuggur; or

* Universal Hist. Vol. VI. p. 67. † See Mem. of Map Hind. p. 282.
‡ Lieut. Emmit's letter.

the same distance as Beejanuggur is, from the Kistnah: * and Capt. Reynolds, who was, probably, well informed concerning it, places Ranny-Bednore 142 G. miles, N N W of Seringapatam; 59 N E of Bednore; and 69 S E from Darwar; which does not differ materially from the report of its distance from Beejanuggur.

Roydroog, although it has no share in determining the boundary, is yet a capital position, and proper to be mentioned in this place. It is given in Capt. Beatson's map, at 21 G. miles south, a little eastwardly from Balhary. I conceive, however, that it lies to the S W of Balhary; because it is said to be 22 leagues only, from Ranny-Bednore; or about 57 G. miles. † Besides this, a chain of distances from Ganjecotta, also assigns this westerly position to Roydroog. ‡ It says, indeed, also that Roydroog is 18 leagues, S E by S, from Beejanuggur; § but as Capt. Beatson's distance from Balhary is likely to be right, although his bearing may not, it is probable that it should be 8, instead of 18 leagues; and then, all will agree pretty nearly. Roydroog, is Tippoo's frontier towards the Nizam.

Hurryhur, a town on the east side of the Toombuddra, was the point at which Mr. Emmit began to trace that river, downwards, to the neighbourhood of Adoni. Hurryhur is situated about W 30° N from Chitteldroog, distant about 40 G. miles: ‖ but its position in respect of Ranny-Bednore, is not given. I conceive Hurryhur to be 12 or 15 miles to the S E of the latter; and apparently situated on one of the great roads, leading from Darwar to Seringapatam.

By the appearance of the course of the Toombuddra, below Ranny-Bednore, in Capt. Reynolds's sketch, I conclude that he made use of Lieut. Emmit's survey of it, mentioned above. It forms the

* Univ. Hist. Vol. VI. p. 69. † Id. p. 68.
‡ Id. page 68. Tademeri is said to be 12 leagues S W of Ganjecotta: Anantapour, 8 leagues N W by N from Ganjecotta; and Roydroog, 18 leagues, west, from Anantapour.
§ Id. page 69.
‖ Lieut. Emmit's letter.

N W boundary of Tippoo towards the Mahrattas, from a point, a little above Ranny-Bednore, to the neighbourhood of Beejanuggur; where the Annagoondy Circar (reserved to Tippoo, for a reason that will be given hereafter) occupies both banks of the river for 12 or 13 miles; and then the boundary finally quits the neighbourhood of the river, and proceeds towards Balhary, as before noticed.

From the Toombuddra near Ranny-Bednore, to the coast of Malabar, Tippoo's new boundary runs in a curved line to the W N W; striking the coast at about 12 miles to the north of Sedashygur, in the bay of Carwar.

On the south, the triangular space contained between the aforesaid curved line, the Malabar coast, and the province of Bednore, includes the province of Soonda; and on the north of the line, the new Cessions to the Mahrattas, in the Dooab, extend to the crest of the great western Gauts, above Goa. Of these, we shall speak more fully in the sequel.

All the places situated within the new boundaries of the Mahrattas, and of the Nizam, in the Dooab, are laid down from Capt. Reynolds's sketch. Within those of the Nizam, on the side of Cuddapah and Gooty, the places are taken, chiefly, from Capt. Beatson's map: as are those also in the north Carnatic, Guntoor, and Palnaud. Both of those gentlemen, together with Capt. Allan, have very great merit, in devoting the principal part of their leisure, as well as their hours of duty, to the service of their country.

[END OF THE CONSTRUCTION OF THE MAP.]

SECTION II.

Particulars *relating to the* Natural *and* Political Division *of the* Peninsula *of* India.

The Balagaut* Carnatic, or Table Land, as it is ordinarily called, is strongly marked in the map, as being a principal feature, both in the natural and political face of the country. That portion of it which appears here, is only the principal part of a larger tract of the same nature, and of a triangular form, extending from Coimbettore, southward, to the parallel of Surat, northward: its western side skirting the Malabar coast at no great distance, and approaching nearer in the parallel of Bednore, than in other parts. On the east, it forms a very irregular line, from the south point of the triangle, Coimbettore, to a point near the Godavery river, in the eastern quarter of Golconda; approaching in some parts of the north Carnatic, within 50 miles of the sea. The north side of this triangle, is also irregular; it passes on the north of Mahur, so as to include that province of Berar, in the Balagaut; and leaves Ellichpour in the Payen Gaut, or lower Berar.† Finally, having reached the neighbourhood of the Tapty river, it conforms to its general course, westward, until it meets the western side of the

* The terms Balagaut and Payengaut respectively mean the regions lying *above*, and *below*, the Gauts; the word Gaut, which in a limited sense signifies a pass, through, or over, mountains, being applied in a more extensive signification to the mountains themselves.

† Capt. Kirkpatrick's MSS.

triangle near Surat. Thus this Table Land occupies 10 degrees of latitude in its length, and more than 7 of longitude, at its greatest breadth. We are not yet informed concerning its exact height, but are told vaguely that it is 3000 feet at the eastern side, opposite to Madras; unquestionably the highest part on the eastern side of the Peninsula; because from this parallel, the waters decline to the north and south: and as they universally decline to the east, we have a proof that the western side is higher than the east; and it is by far, the steepest.

This elevated tract occasions a diversity of seasons in the flat countries on both sides of it (that is, the coasts of Malabar and Coromandel), as well as a modification of them, on the very tract itself. It is pretty commonly known, that the winds in this region, blow periodically from the S W, and N E; and that each of these winds, blowing from *seaward*, occasions a rainy season on the coast that lies open to it: the cause of which appears to be, that the lofty sides of the Table Land, stop the greatest part of the clouds, and occasion them to condense and fall on the low country. But, notwithstanding, clouds enough reach the Table Land, to occasion a partial rainy season there, during the early part of the rainy season on the coast: but it seems confined chiefly to that side of the Table Land, that lies to windward: and the proportion of rain that falls above, is probably not one fourth of what falls below. The great rivers that rise on the Table Land, all of which have their springs very far to the west, are much swoln by the S W monsoon. But we are not, by any means, thoroughly informed concerning the particulars of the seasons, within this tract; or more especially concerning the extent and duration of the effects produced by the rainy season of the north-east monsoon.

The rainy season of the S W monsoon, prevails during the months of May, June, and July, on the western coast of India: and that of the N E monsoon, on the opposite coast, during a small part of October; and throughout November and December. The

rains of the former are by much the heaviest, in the Peninsula: and in Bengal, the quantity of rain is probably not less, than what falls during the same season on the Malabar coast; where, by experiment, it has been found equal to 72 inches in the year.

All the waters that are collected on this vast extent of Table Land from Coimbettore to the neighbourhood of Surat, run to the eastward; proving, as we have said before, a general declivity of the ground towards that quarter.

Between the parallels of 16 and 21, the waters decline to the *south* of east; and between 16 and 13½, to the *north* of east; the Godavery and Kistnah being the great discharges. And again from 13½ to the southern extremity of the Table Land, the waters run to the south of east; proving the existence of a convexity or ridge across the Peninsula, between the points of Dalmacherry and Mangalore: and in this quarter, the Cauvery is the principal discharge.

The principal rivers that have their rise on the Table Land of the Peninsula, are the Kistnah, Toombuddra, Cauvery, and Pennar: all of which, although springing from within 20 or 30 miles of the Malabar coast, yet, fall into the eastern sea, or gulf of Bengal. Of these rivers, the Kistnah, together with its sister stream, the Toombuddra, and their subordinate branches, drain upwards of six degrees extent of this upland tract. The Kistnah is taken as the general northern boundary of the tract under consideration; as lying beyond the utmost point of Tippoo's former boundary; and, of course, including the ground-work of our whole subject. The space included between the lower parts of these rivers Kistnah and Toombuddra during their separate course, is distinguished, like other tracts of the same kind in India, by the name of DOOAB, or country included between TWO WATERS; a very significant term.* Within this tract, the Mahratta share of the new Cessions, is comprized; as well as a small part of the Nizam's: the remainder of

* See also the Introduction to the Memoir of the Map of Hindoostan, page cxvi.

the Dooab already appertaining to the Mahrattas and Nizam. The Mahratta share is therefore extremely compact; and being a very rich country, makes a smaller figure, in the map, than the Nizam's, or ours; which consist generally of lands lefs fertile and productive. Through the northern part of the Dooab, two other considerable rivers, the Gutpurba, and Malpurba, discharge themselves into the Kistnah; the latter of which, formed a part of Tippoo's original boundary; and has on or near its banks, the fortrefs of Badamgur, or Badammy, rendered famous in the wars between Tippoo and the Mahrattas.

Of the nature and quality of the countries in general, above the Gauts, we have not collected particulars enough, to form a just judgment, as yet: of course neither their positive nor relative value can be ascertained by any persons in this country. But the various directions in which they were traversed by our armies, and more particularly by the British detachments serving with the Mahrattas and Nizam, one must naturally suppose, should have furnished abundant matter to enable those on the spot, to do it with effect, in most places, save that angle of the Table Land, below Seringapatam.

Adjacent to the eastern side of the Table Land, (in the Peninsula; for our details are not meant to extend beyond it) and nearly parallel to it, in the space between the Pulicat lake and the Cavery river, a tract of mountainous country extends more than 180 miles, between the foot of the Table Land, and the level of the Carnatic; forming a number of extensive, fertile, and beautiful vallies; amongst which, those of the Barra-Mahal and Salem are the most remarkable. These two vallies are separated by the pafs of Tapoor, which is composed of several long and difficult ascents, from Salem upwards to Barra-Mahal; whence, of course, the latter must be considerably elevated above the level of the Carnatic; and, in effect, it forms an intermediate step between that and the

Table Land of Mysore; with which it also communicates, by means of several paſses, or ascents: and particularly by the direct ones of *Oodeadurgam* and *Ryacota*. A second set of paſses lead downwards from the Barra-Mahal, into the Carnatic. From this, and an inspection of the map accompanying, it will be easy to conceive that the poſsesion of these vallies, from Dalmacherry to Salem, by the British and their ally the Nabob of Arcot, must neceſsarily cramp the measures of the enemy, in any project for the invasion of the Carnatic: at the same time that they open a ready way for us into the enemy's country. This, therefore, constitutes the first and most important of our new acquisitions.

On the south of the Table Land, and separated from it by a valley of 14 to 16 miles wide,* in the mouth of which, facing the Malabar coast, stands the fortreſs of Palicaud (or Palgatcherry) is another tract of mountainous country, extending, in its longest line of dimensions, in a southerly direction, and terminating in the well known promontory of Cape Comorin. The figure of this tract, may be rudely expreſsed by the letter T; the upper part of which, confines the vallies of Coimbettore and Daraporum on the south, whilst the stem represents a ridge, or appenine which divides the two coasts, at the extremity of the Peninsula. The foot of the T will then represent Cape Comorin, and the extremities of the upper part of it, our two posts of Tritchinopoly and Palicaud. The level, compact, and fertile space lying between this hilly tract, the Cavery river, and the Table Land of Mysore; namely, the provinces of Coimbettore and Daraporum, comprizes the whole of the country below the Gauts, on this side the Peninsula, that is left to Tippoo by the late treaty. And even this is almost surrounded by our new acquisitions of Salem, Palicaud, and Dindigul; so that it is placed almost in the state of a *pledge*, in the event of hostility.

By what has been said, the low country on each side of the Table Land, must neceſsarily be confined to a comparatively narrow slip;

* See the Memoir of the Map of Hindoostan, page 276.

and that on the west, or Malabar side, is by far the narrowest of the two: so that the streams formed by the copious rains that fall there, gain the sea too soon, to allow of a junction with each other, and thereby forming rivers of any bulk. For this reason, the incredible number of water-channels that occur on the Malabar side, render the country very inconvenient for land carriage; and, of course, for military operations on an extended scale.

I CANNOT learn, with any degree of certainty, whether amongst the Hindoos, and antecedent to the first Mahomedan conquest, about the middle of the 16th century, the term CARNATIC was applied to the whole, or only to a part of, the Peninsula of India: but I conceive from circumstances, that it expresed the whole tract south of the Kistnah, (or rather, perhaps, that branch of it named Malpurba) and was applied as a natural, rather than as a political division. The term is no doubt very ancient.

The celebrated historian Ferishta, early in the 17th century, appears to design by the term Carnatic, the whole tract that lies south of the Kistnah; (or, at least, of that branch of it named Malpurba; for amongst the upper branches of the Kistnah, that which continues to bear the proper name of the river, has a very oblique course from the NW: whilst the Malpurba, which is also a large stream, continues nearly in a line with the general course of the main river; which is from west to east). That this was Ferishta's idea, is clearly shewn by his expresly mentioning more than once, as included in the Carnatic, the provinces of Rachore, (or Rychoor) Adoni, and Bancapour: as well as some places that lie even to the north of the latter.* Ramiser (or Ramiseram) he mentions as the

* Kirkpatrick's MSS.

southern extremity of the Carnatic: posibly from his ignorance of the comparative positions of that point and Cape Comorin.

But although Ferishta may have designed the whole Peninsula by the general term of Carnatic, yet the ASUFIAH REGISTER * (of the Moguls) evidently excludes from this description, not only the countries lying beyond (that is north of) the Toombuddra river, after it turns to the N E, but also the province of Adoni, which lies to the south, both of the Kistnah and Toombuddra. So that it is probable that the Moguls reckoned the Toombuddra the N W boundary of the Carnatic; unlefs we are to suppose that they made a distinction between the natural and political division; retaining the idea of Ferishta, in a general sense, whilst in their Registers, alterations might have taken place, on occasion of throwing particular districts into one or another collectorship, either to effect a measure of real utility, or for the sake of patronage. † One fact however, is clear; that the Moguls reckoned all, save the Dooab and Adoni, in the Carnatic: whilst *we* have applied the term to one of the *subdivisions* of it, the Carnatic *Payen Gaut*: or the narrow tract of low country, lying on the east of the Table Land.

Previous to the Mahomedan conquest, the greatest part of the Peninsula was subject to one Prince or Rajah, ‡ whose capital was Beejanuggur, (corruptly Bisnagar, and by some few travellers, called Narsinga) situated on the south bank of the Toombuddra river. This city, which was extensive and regularly built, is said (by Ferishta) to have been founded by Belaldeo, king of the Carnatic,

* This is a voluminous Manuscript, sometimes called by the Deccan writers, the *Debbeh-deh* of the Deccan (i. e. the Village Detail of the Deccan): and sometimes, the DEFTER ASUFIAH; or the Register of ASUF; that is, of NIZAM UL MOOLK, ASUF JAH). It profeſses to exhibit in detail the revenues actually realized from the six provinces of the Deccan: and the detail of all these provinces, except Hyderabad, is, in fact, exceedingly minute; the revenue of each being stated severally by Circars, by Mahals, or Purgannahs, and very generally, by Villages. Kirkpatrick's MSS.

† Thus Adoni being in the centre of the Peninsula, was sometimes clafsed under the head of Bejapour, sometimes under that of Hydrabad. Kirkpatrick's MSS.

‡ The author of "the View of the Deccan," styles this state the empire or kingdom of CANARA.

in A. D. 1344. * This situation of a capital city, almost at the extremity of a great empire, shews that it was chosen with a view to direct the attention of government towards the weakest frontier, rather than to forward the purposes of internal government. About this period the Mahomedan empire in the Deccan, which bordered on the Carnatic, was at the height of its power, under the Bahmineah dynasty, whose capital was Calberga; † however it does not appear that the Hindoo government in the Carnatic, was subverted until the states which were formed out of the ruins of the empire of the Deccan, leagued together for the purpose of accomplishing it.‡ About the year 1567, Beejanuggur was taken and sacked, by the confederate princes; and the king, or his representative, retired first to Penuconda, || and afterwards to Chandegheri in the Carnatic, Payen Gaut: his kingdom fell into confusion, and in the stronger parts of the country, the Hindoo governors of provinces, became independant Rajahs or Princes, (some of whom, in the western parts, preserved their independency till the present century; or the end of the last; when they were imperfectly subjugated by Aurungzebe): but by far the greatest part of the Peninsula, was reduced by the kings of the neighbouring states of Bejapour or Visiapour, and Hydrabad, before the close of the reign of Shah Jehan. The conquests thus *made*, were divided into Bejapour and Hydrabad Carnatic; by a boundary line that ran nearly along the middle of the Peninsula. One of the Bejapour generals employed in these conquests, was Sahoojee, the father of the famous Sevajee, (founder of the Mahratta state) and of Eckojee, afterwards sovereign

* Having a good deal to say on the subject of this ancient city, I have thrown it together under one head, at the end of the Memoir.

† See Memoir of Map Hindoostan, page lxxix. Also the historical and political view of the Deccan, page 2.

‡ Cæsar Frederick. View of the Deccan, page 2.

|| This place is said to be 20 leagues N E of Sirpi; 10 N N W of Chinna-Balabaram. Modern Univ. Hist. Vol. 6. p. 67. Cæsar Frederick says it is 8 days journey from Beejanuggur. See also the notes to Mr. Orme's Hist. Fragments of the Mogul Empire.

of Tanjore, in right of his father. It appears that Sahoojee, after making these conquests for the king of Bejapour, held a great part of the Bejapour Carnatic in Jaghire; * and whilst in possession of it, was solicited by the Rajah of *Madcul*, (or Madura) to assist him in his contests with the then Rajah of Tanjore. † This gave rise to the Mahratta conquests in Tanjore, and in the southern Carnatic: in the former of which, the line of Sahoojee is continued in the present Rajah: in the latter, their dominion ended by the taking of Ginjee, capital of the principality, about the close of the last century, by Aurungzebe's generals. The general of the king of Hydrabad, was the famous Meer Jumlah, who appears to have reduced the remainder of the Balagaut-Carnatic, and perhaps part of the Payen Gaut also; and afterwards falling off from his master, transferred its dominion to the Emperor of Delhi. Capt. Kirkpatrick supposes that the conquests of Meer Jumlah were the first possessions of the house of Timur, in the Carnatic. On this occasion the name CARNATIC, is said to appear for the first time in the Mogul Revenue books.

In the Asufiah Register, the Carnatic, under Aurungzebe, was partitioned into two grand divisions; subject to the two adjacent Soubahs or Vice Royalties of the Deccan, ‡ Bejapour, and Hydrabad (or Golconda). The common boundary of these Soubahs originally touched the Kistnah at a point nearly midway between the two seas; and on occasion of the new conquests, it was prolonged through the Carnatic, so as to leave a larger portion on the western or Bejapour side, than on the eastern, or Hydrabad side. For it appears to have passed from the Kistnah, near the conflux of the Beemah, by the shortest line, to the Pennar river, at the place

* Capt. Kirkpatrick's MSS.

† Sahoojee's residence was then at *Balapour Coolbur*. (Kirk.) I am not enough master of the history, to determine, whether by this, *Colar* (as written in our maps), is meant.

‡ Then divided into six Soubahs, namely, Aurungabad (formerly Dowlatabad and Ahmednagur). 2. Berar (B. and Payen Gaut). 3. Candeish (or Khandaise). 4. Beder. 5. Bejapour (only Visapour). 6. Hydrabad (or Golconda).

where it changes from a N to an E course; and then tracing its course upwards for a considerable distance, it struck to the S E, so as to fall on the crest of the eastern Gauts near Palamnaire; where the Marquis Cornwallis ascended them in 1791: from whence, proceeding southward, it followed nearly the line of the Gauts, so as to leave Barra-Mahal (or the greatest part of it) to the Hydrabad side: and then southward, afsigning to the same government, the dependencies of Tritchinopoly and Volconda; whilst those of Senkerghur (meaning the valley of Salem) remained to Bejapour. As in the Register, the countries lying between Wandiwash, and the Cavery, are styled the *conquered countries*; and Tanjore and Tritchinopoly are mentioned as the southernmost poſsefsion of Hydrabad; it is also probable that the Bejapour division did not extend beyond Coimbettore; Senkerghur (or Sankerydurg) being the remotest district that I can trace; and, like Tritchinopoly in the other division, it closes the list.

The detail of the division of the Peninsula, was as follows: The eastern or Hydrabad portion was divided into *Bala-Gaut* and *Payen-Gaut*; the former expreſsing the countries above the Gauts; that is, on the Table Land; the latter, the low country between it and the eastern sea; and to which the term CARNATIC, is now exclusively applied. The Bala-Gaut districts of Hydrabad, appear, as we have said, to have been the first conquests made by the Moguls in the Peninsula: and consisted, generally, of the five circars, or provincial governments of Cummum, Sedhout, (or Cuddapah) Ganjecotta, (or Gandicotta) Gooty, and Gurramconda; of which, the principal parts of Cummum, a large proportion of Sedhout, and Ganjecotta; and a small part of Gooty, constitute the great body of the late ceſsions to the Nizam. The Payen-Gaut was divided into 14 circars, (exclusive of Tanjore and Tritchinopoly) of which the 7 northernmost ones of Udagheri, Serapilly, Chendagheri, Kenchi, (or Conjeveram) Chingleput, Tripalore, (which included

Madras, under the name of Mundooraj) and Wandiwash: had, apparently, at the date of the Register, been for some time settled under the Mogul government: for the other 7, which were the furthest removed from the seat of government, were styled *conquered provinces*. These were, namely, Ginjee, Trinomal, Vellore (which included Arnee), Palimcottah, (near the Coleroone) Warriore, Volconda; and *Jugdeo*, which included Caveripatam. With respect to the latter, we can be under no doubt, that it meant the Barra-Mahal, or part of it, and that the name of the district as well as that of the fort of *Jegadivy*, had a relation to the name of Rajah Jug-Deo, who originally held the district. We find also, a part of the same Rajah's territories, included in the Bejapour division. By means of several names that occur in the Register, in this and the adjacent tract, we find that the common boundary of the Bejapour and Hydrabad Carnatic, lay between Caveripatam, and Ancusgurry (*Inguskurry*, in the list), which lies immediately above it on the Table Land. Together with Ancusgurry, we find Boodicotta, Congoondy, and Colar, included in Bejapour; whilst Condour (or Condnour), Cotapollam, and Gumipaleam, appertain to the Gurramconda circar (of Hydrabad). We may therefore conclude with certainty, that the boundary touched the crest of the Gauts between the Muglee and Dalmachery passes; from which point, we have endeavoured to trace it southward to the borders of Tritchinopoly, in the last page.*

In the Bejapour division of the Carnatic, we trace a more recent subjugation of the country, in an arrangement that appears to have arisen, either from necessity, or from want of opportunity to collect the necessary information concerning the detail. For in the first instance, we find the Bejapour Carnatic, though much larger than that of Hydrabad, † thrown together in the Register,

* All these particulars are collected from Capt. Kirkpatrick's MSS.

† All matters relating to territory, were on so wide a scale in the Mogul Empire, that even the conquests we are now describing, were considerably more extensive than our island.

in two articles only; viz. the Bejapour Carnatic, containing 55 Mahals or Purgannahs; and the districts dependent on it (which formed by much the largest part of the whole) in 27 Mahals. The provinces or circars of Bancapour, Moodgul, and Rychoor (or Rachore) which occupied the greatest part of the Dooab, and of course lay south of the Kistnah, and Malpurba, were considered rather as members of Bejapour *proper*, than as a part of the Carnatic. And this is shewn by a superior degree of accuracy in the detail; for the villages in each Purgannah are enumerated; which seems to prove, that the country on the north of the Toombuddra, had been regularly subjugated by the former sovereigns of Bejapour, and was consolidated with the ancient domains of that Soubah; whilst the arrangements for the collection of the revenues on the south of that river, were in an indigested state. And here perhaps we may trace the reason why the term Carnatic was confined (in the Mogul revenue books) to the lands south of the Toombuddra; that is, because those on the north of it, had been considered as a part of Bejapour; whilst the new conquests were regarded as a part of the tract, already arranged under the head of CARNATIC, in the Register of the Hydrabad districts; and which was an earlier conquest.

The loosenefs of the arrangement of the Bejapour Carnatic districts, in the Asufiah Register, may be gathered from the vast disproportion in the value and extent of the different tracts in it; some amounting to the size of principalities, and others being mere townships: in effect, they were held under military government; and the produce of their revenue was in the nature of tribute, or of contribution. Such is the nature of the accounts in the Asufiah Register; or that of Nizam ul Muluck.

It is uncertain whether the low countries in general along the foot of the western Gauts (in the Peninsula) were in any shape reduced, by the Moguls, at the date of the Register. If they were, they are not clafsed separately, like the Payen Gaut on the eastern

coast: poſsibly, if reduced, they were deemed too inconsiderable for a separate department, whilst such large divisions existed above the Gauts.

We are not poſseſsed of the information requisite to describe the changes, by which the provinces in the Peninsula paſsed from under the Mogul government, to that of its delegates, or to the original proprietors: and from thence to Hyder Ali and Tippoo in our own times. The reader will however find much general information concerning Hyder's conquests, and the chronological order in which they were made, in a publication intitled, "An Historical and Political View of the Deccan, south of the Kistnah, published in 1791." With respect to what happened on the virtual diſsolution of the Mogul empire on the invasion of Nadir Shah, in 1739, we know little more than that the superior weight of the Nizam's power, over that of the Mahrattas, (at that period) secured him the poſsefsion of a considerable part of the Bejapour Carnatic, in addition to what became his own, by his usurpation of Hydrabad; the whole Dooab, and the countries between it, and the Pennar river, particularly: although at a later period, the principal part of the Dooab, paſsed into the hands of the Mahrattas; and from thence, into those of Hyder Ali; from whose succeſsor we have now seen it wrested, and by treaty formally restored to, the Mahrattas and Nizam. It is probable too, that at the diſsolution of the Mogul empire, such of the principal Rajahships or principalities, as from their situation, had been but imperfectly reduced by the Moguls; such as Seringapatam, Bednore, and others; were immediately re-established in the families of their former princes; from which state, we saw them gradually reduced to the condition of provinces of the Mysore empire. The Nizam, become a weaker power than the Mahrattas, suffered a greater loſs of territory, by the gradual encroachments of the Mysore chiefs; since they left him scarce a vestige of the Hydrabad Carnatic *Balagaut*; and the *Payen Gaut* had long before been poſseſsed by Mahomed Ali (of

Arcot) under the British influence. The late partition treaty has restored to the Nizam, as we have seen, a considerable part of Hyder's conquests in the Hydrabad Balagaut; but it has also confirmed to the Mahrattas, their former encroachments on the Nizam, in the Dooab. Such are the rights created by superior power; and which must necefsarily prevail over the whole globe: but it must be confefsed, that in India, the changes are much too frequent, for the comfort and happinefs of the people. Since the dissolution of the Hindoo monarchy in the Peninsula, about two centuries and a half ago, the revolutions have been so frequent, that we are surprised to find in it, at present, so great a population, and so ample a revenue; and which perhaps could not have been upheld by a people lefs patient, or lefs industrious, than the Hindoos.

SECTION III.

Some OBSERVATIONS *on the* POLITICAL *and* MILITARY ADVANTAGES *that may be derived from the new* CESSIONS *in the* PENINSULA.

IT remains that we should particularize the districts ceded to the British; those to the Mahrattas and Nizam being already mentioned in the course of the Memoir. * The British acquisitions are in three separate tracts or parcels; but are, in effect, joined, by the intervention of the territories of our allies, the Nabob of Arcot, and the Rajah of Travancore. It would, no doubt, have been more convenient for us, to have poſsesſed, in addition to the districts actually ceded, all the country of Coimbettore; so as not only to preserve a direct communication acroſs the Peninsula, but also to deprive Tippoo of a granary, and of resources. But it must be considered that *on the basis of the preliminary treaty*, we could take no more than we did. We were limited to a certain sum of revenue; and we could only take such a quantity of land, as produced that amount. The question then, after the preliminary treaty was made, was only concerning the choice of situation. The first object, unquestionably, was the immediate protection and future security of the Coorga Rajah, and of the Nayres in the Calicut province; both of whom, partly on our account, were placed in the state of rebels with respect to their old master †. Therefore

* See pages 11, 16, 17, 23.

† The reader may find several interesting particulars respecting the Coorga and Nayre countries, in the 2d number of the Oriental Repertory, published by my friend Mr. Dalrymple.

the choice of the Coorga, Calicut, and Palicaud districts, was indispensible, as it regarded justice, and national honour: an attention to which, has dignified both our councils and actions, throughout the war. It happened to be also neceſsary in a political view; for the Coorga Rajah holds a paſs which leads from the Malabar coast, by a short route, and through a remarkable strong country, to the neighbourhood of Seringapatam (the route taken by Abercromby). The Nayre country, on the other hand, opens to us a communication with Palicaud, or Palgatcherry, a fortreſs which commands the paſsage between the two coasts of Malabar and Coromandel, by way of the Tritchinopoly, and Coimbettore countries. * Coimbettore being in Tippoo's hands, Palicaud is of the greatest importance to us: for by our holding this place on the west, and Dindigul on the east of, Coimbettore, we render this province of little use to Tippoo, in time of war, unleſs he keeps a very large force there, to protect it.

The second object, in a general view, but in a mere political one, *the first*, was the poſseſsion of the Barra-Mahal, and other districts, which contain the paſses between the southern Carnatic, and Mysore. (See alſo pages 17, 18). This tract is, perhaps, leſs useful to us in a defensive, than in an offensive view, in the event of future quarrels with the Mysorean: for, not to mention, that in the first instance a defensive war on our part, must inevitably ruin us; it may be said that a defence that rests too much on the fortifying of certain paſses, must be nugatory: we may *impede*, but we cannot *prevent*, the irruption of a powerful and active enemy; so that the use of confining an enemy to a certain paſs, is to know for certain where to find him. On the principle that Tippoo always has made, and if permitted, ever will make, war on us; that is to say, by desolating our country; and whilst he evades an attack, harasses and wears out our troops and resources; we must lose ground in the contest. The late glorious succeſses of our arms, shew what

* See this Memoir, page 18.

the plans of our campaigns ought to be, should Tippoo again feel his strength: we must at all events, carry the war into *his* country, by attacking his capital, and other principal fortreſses; to accomplish the double purpose of keeping him at home, and reducing his power, at the same time. In the event of a war, therefore, we should find a more direct and easy acceſs to the enemy's country, by the centre of the Barra-Mahal, than by any route we have hitherto taken: and have our convoys also secured, by a chain of posts. We shall also, set off from a point, five marches nearer to Seringapatam, than in our last expedition: and may arrive at it, in 8 or 9 from the head of the paſs, by the way of Ouſsoor.

The immediate security of our own poſseſsions, and that of the Coorgs and Nayres, being provided for, the remaining object of consideration, was to poſseſs the *next useful* piece of territory to ourselves; or what would render the enemy's frontier leſs secure to him. Dindigul must have immediately occurred; as being the key of Coimbettore, on the side of Tritchinopoly: and as having appertaining to it, a territory that projected far into the heart of the southern provinces: by the poſseſsion of which, we of course shortened our line of defence. It is an undoubted fact, that the power which presents a strong frontier, is master of the open country of his adjoining neighbour; unleſs an adequate force be stationed in it: so that, combining the advantages resulting from the poſsession of both Palicaud, and Dindigul, we may consider the Coimbettore and Daraporam countries as at our mercy, unleſs the enemy divides his force; a measure that would give us still greater advantages. I could have wished, however, that we had a more direct communication with Palicaud, and the western coast, than we now have: for it must be remembered, that although the districts on the Malabar coast, are subject to Bombay, yet they will from situation, always call for sudden aid on Madras: and therefore, perhaps, should be placed under that Presidency in the first instance.

And during the S W monsoon, those districts might as well be subject to Fort Marlborough, as to Bombay.

It may be said, that we may force our way acrofs the open country of Coimbettore, to Palicaud; which is true: but it would be more convenient to have at all times a direct communication through our own territory. And Carroor, if it could have been included within our new boundary, might, perhaps, have been a useful advanced post, from the side of Tritchinopoly: but I am ignorant of the state of its defences.

We must not overlook the immediate advantage resulting to us, from the local position of the Nizam's new acquisitions, on the N E. By this cefsion, Tippoo is removed from our frontier in the north Carnatic, (Nellore, Ongole, and Guntoor) for an extent of 150 British miles: which is a prodigious reduction in our line of defence.

Many will regret that so great a portion of the Malabar coast, as the whole Canhara * province, should be left to Tippoo; and it would certainly have been better, in other hands: but on the basis of the preliminary treaty, we could not take it (how much soever inclined), for the same reason that we could not take the Coimbettore country; namely, that we had our full share without it. The Mahrattas certainly would not take it, in preference to a compact, fertile territory, so much nearer home; and easier of accefs. They are neither a maritime, nor a mercantile people; so that it presented no local advantages to them, equal to what the Dooab did. (See the map.)

The great distance of this province from Madras, and the impofsibility of its receiving succours from Bombay, during the greatest part of the S W monsoon, would have rendered it an inconvenient pofsefsion to the British power. The northern Circars, on the opposite coast, whose geographical situation, in respect of

* The province of Canhara or Canara, contains the districts that paſs under the names of Mangalore, Onore, Carwar, &c. and appears to be the Pepper country, to which the Romans traded, in the time of Pliny.

Madras and Bengal, is somewhat similar to that of the Canhara province, in respect of Madras and Bombay; stand in point of political circumstances, widely different from the province of Canhara. The Circars are far removed from the neighbourhood of any powerful chief, and have a natural defence, consisting of waste and mountainous tracts, of great extent. Canhara, on the contrary, has a powerful enemy (Tippoo) on its very borders; and has not such natural defences as the Circars have. It cannot be relieved by sea, at all seasons, as the Circars can: for the latter may be promptly relieved by sea from Madras, in the S W, and from Bengal in the N E, monsoon: but Canhara cannot in effect, be relieved by either in the S W monsoon. Perhaps the best transfer that could have been made of this province would have been to the families of its ancient Rajahs; we establishing a fortified post or two in it.

It is utterly impofsible, in the present imperfect state of our knowledge of the geography of the northern part of the Peninsula (notwithstanding the present improvements), to describe, with any degree of accuracy, the boundaries of the new Cefsions to the Mahrattas and Nizam;* or even the positions of all the principal places,

* The particulars and value of the Cefsions made by Tippoo, are as follow:

To the East India Company.	Koonteary pagodas
Calicut and Palicaudcherry	9,36,765
Dindigul, Pyany, and Verapachry	90,000
Salem, Koosh, Namcool, and Sunkagherry - -	88,000
Ahtoor, Purmutty, Shadmungul and Vayloor - -	68,000
Barra-Mahal, Raycotta, Darampoory, &c. - -	1,34,000
	13,16,765

To the Mahrattas.	
In the Dooab, being the Circar of Bancapour, with* part of Moodgul, &c.	13,06,666
In Gooty, the district of Sundoor †	10,000
	13,16,666

To the Nizam.	
Kerpah (or Cuddapah) Cummum, Ganjecotta, and Canoul - - -	9,71,390
In Gooty - - - -	51,782
In Adoni (Mooka) - - -	12,162
In the Dooab, being parts of Rachore, and Moodgul	2,81,332
	13,16,666

Total of the Cefsions about 39¼ lacks of pagodas.

† The geographical position of this small district, has not yet been ascertained, so that

situated within them. A very good *general idea*, may however be collected from the map; sufficiently to understand the comparative extent and situation of each tract; and combining with this, the value of each, their comparative fertility and population may be inferred. As to the value of the territory left remaining to Tippoo, we have no absolute *data* for making the calculation: but from appearances, one might be led to conclude that he had retained the largest share. And if he really did so, through our misapprehension, the Mahrattas and Nizam's officers are blameable for their want of observation, in those parts of the country, which they had explored: and for want of which local knowledge, our commander in chief could have no means of forming a judgment of the real or comparative value, of the greatest part of Tippoo's dominions.

One circumstance strikes us very forcibly, and that is, the small extent of the Mahratta share in the map. There is little reason to suppose that any considerable error has arisen, in the arrangement of the positions, on which the geographical construction of that tract depends; namely, Darwar, Kopaul, and Ranny-Bednore, in pages 7, and 11. And yet the whole Mahratta share (10,000 pagodas, or about the 192d part of the whole excepted) is included in the Dooab; and that on the west of Kopaul. So that the country must be exceedingly fertile and populous: and indeed, Lieut. Emmit's account of the country along the banks of the Toombuddra, proves it. His words are, "I have found the banks "of the river, [Toombuddra] amply stored with towns; many of

Tippoo's whole revenue was taken at 79 lacks, or double the sum of the cessions. It appears that these pagodas, termed *Koonteary*, in the copy of the original treaty, sent to England, are rated at three rupees each, and no more: for we are told in the London Gazette of Nov. 3d, 1792, that the sum total of Tippoo's revenues was taken at 237 lacks of rupees; of which, a sixth part, equal to 39½ lacks, is stated on a former occasion to be the value of the British acquisitions. The Oriental Repertory (No. II. page 231) also assigns the value of three rupees to a koonteary pagoda. The term itself appears to be provincial; as koonteary cesses are also in use, in Mysore.

If the rupees are reckoned at 2s. 1d. each, which I apprehend to be their full intrinsic value, the sum of Tippoo's net revenue will be under two millions and a half sterling; or more precisely, 2,468,700l. Of course the annual revenue of the British acquisitions will be 411,450l.

"them respectable." And again, "I have paſsed the following "towns, which are the largest of the vast number I have met with:" and he then enumerates ten of them, in the space of leſs than 70 B. miles. The Mahratta share in the Dooab, appears to contain 7962 square British miles, the revenue of which is taken at 411,450l.; consequently, each square mile is worth to the state *per annum*, near 52l. or *per* acre, about 1s. 7¼d. If we take Tippoo's ancient territory at 98,000 miles, and reckon the revenue at the sum fixed by the preliminary treaty, it would amount to about 25l. only per mile. The land tax of England and Wales, may be about 33l. per mile. But it must be taken into consideration, that in the Peninsula, the land tax represents the revenue in general; in England, it is leſs than one-eighth of the whole.

The British acquisitions *may* be reckoned 15,370 square miles; and the Nizam's 12,750. * In our share, we have a great deal of

* Here follows a particular statement of the number of square British miles, contained in the several political divisons in the Peninsula; taking for its N W boundary, the Malpurba River, as far as its course is known; and from that point, which falls in the parallel of 16°, an imaginary line along the parallel, to the western coast. The Area of the whole Peninsula, according to the present improved state of its geography, taking the Kistnah and Malpurba Rivers for its northern boundary, is about 167,911 square British miles.

			sq. Br. m.
Of these, TIPPOO heretofore poſsesſied		98,090 * *	
His Ceſsions to the	British 15,374		
	Mahrattas 7,962	36,081	
	Nizam 12,745		
Remains to TIPPOO			62,009
BRITISH Poſsesſions and Alliances.			
New acquisitions	15,374		
Guntoor Circar	3,779		
Jaghire	2,436		
Total of BRITISH POSSESSIONS		21,589	
Carnatic and Tanjore	44,297		
Travancore and Cochin	9,376		
Total of BRITISH ALLIANCES		53,673	
Total of BRITISH POSSESSIONS and ALLIANCES			75,262
Acquisitions of the MAHRATTAS and NIZAM			20,707
Ancient poſsesſions of the Mahrattas and Nizam collectively (the common boundary of the two states, not being well defined), together with the territory of Goa, &c.			9,933
Total of the Peninsula in square British miles			167,911

* * Under the old construction, Tippoo's territory was taken at 97,650; or about 440 square miles leſs than the present calculation. See Mem. of Map Hind. page cxxxix.

unproductive land. The Coorga district and the parts adjacent, are little better than a mountainous forest: and as I am informed, there is found generally, on the south of Goa, a tract of the same nature, lying above and contiguous to the western Gauts; and extending from 20 to 30 miles eastward. This forest even extends within 36 or 40 miles of Seringapatam. In the Barra-Mahal and Dindigul divisions, there must neceſsarily be a great proportion of waste land. I conclude also, from what I have heard, concerning the Cuddapah country, that the Nizam must have considerable tracts of the same kind of land in his new acquisitions: so that it is probable that the Mahrattas have acquired a more fertile tract than ordinarily occurs, in Tippoo's dominions.

It may be expected that I should state, from the materials afforded by the Asufiah Register, the sum of the revenue yielded by the several districts in the Peninsula; at the period of its compilation. This I was much inclined to do, until by a close examination of that head of it which includes the Bejapour Carnatic, it appeared clearly that very great errors had crept into it: insomuch, that if the sum total of the revenue of such districts as are known to have been in Tippoo's poſseſsion, be admitted as it stands in the Register; his whole territory, must have produced considerably more on each square mile, taking one with another, throughout, than we have calculated for the produce of an equal space, in the Mahratta share of the Dooab: which, considering what we really do know, and have already remarked, concerning the productive state of the Dooab, and the inferior quality of the lands in the southern parts of Tippoo's late territories; is utterly impoſsible. To this we may add, that Mr. Fraser's statement of the revenue of the Soubahs of Visiapour and Hydrabad collectively (in Aurungzebe's time) falls very short of the sum at which the lands which composed the whole of Tippoo's territory, are rated, in the Asufiah Register.* and of these Soubahs, the Peninsula constituted only a

* Fraser's Nadir Shah, page 34.

part, though by much the largest. This may serve to shew, that the sums allowed for the revenue of the Bejapour Carnatic, in that Register, are wholly inadmisible: but what the real truth is, we have no rule by which we can determine. Nor can we reason from analogy: for whatever may be the comparative state of the two countries of Bengal and Mysore, as to fertility and prosperity (were we able to ascertain it), we should yet want a perfect knowledge of the system of collection, and the rate of taxation, throughout Tippoo's country; in order to form an estimate of its revenue, by a comparison of its extent, with that of Bengal.

The author of the View of the Deccan appears to have gone into the other extreme: and although he came much nearer the truth, than the Register did (which has probably been corrupted, in the numerals of the sums, in the Bejapour Carnatic), yet that he has under-rated the territory, is manifest, by Tippoo's admitting a sum total, that went 47 lacks of rupees beyond the author's calculation. * In the View of the Deccan, the 4th, 6th, and 8th articles alone, are collectively valued at about 41 lacks of rupees, less than they were taken at, by the Allies, to whom they were ceded; allowing three rupees to each pagoda.† The 6th article,

* Tippoo admitted 237 lacks of rupees: (See London Gazette of Nov. 3d, 1792) The author of the View 190 only.

† Statement in the View of the Deccan, page 7 to 15.

		lacks of pagodas.		lacks of rupees
1.	Mysore — Coimbettore —	7 (Hoons)	— —	27 19
2.	Bednore —	7 (Ikeri)	—	28
3.	Soonda —	2 —	—	8
4.	Malabar — —	5 —	—	19 ‡
5.	Barra-Mahal	—	—	5
6.	Countries west of the Hendery and Toombudra Rivers, including the Dooab		—	16 ‖
7.	Bejapour Carnatic	—	—	32
8.	Hydrabad Carnatic	—		29**
9.	Part of Adoni	— —		7
				190

‡ Calicut and Palicaud were taken at more than 9 lacks of pagodas. See note page 32.

‖ Dooab taken at 16½ lacks of pagodas.

** Much less than the whole of this article was taken at more then 9½ lacks of pagodas.

in particular, is estimated at 16 lacks of *rupees*, only: whereas, the Mahrattas and Nizam admitted a produce of more than as many lacks of *pagodas*, for the lands that were ceded to them, in the Dooab; which formed only a part of the 6th article: Roydroog, Chittledroog, and Herpanelly, included in the same article, and which remained to Tippoo, would have swelled it considerably more.

Candour requires that I should also notice my own error, in the estimation of Tippoo's revenue; which in the Memoir of the Map of Hindoostan, 1788, page cxxxix, I took roundly at 400 lacks of rupees per annum. It is no doubt a great deal less: but it would be presumption in me to attempt to fix a standard for it, when others who posseſs a more extensive knowledge of the subject, have evidently failed. Nor should I now have ventured so far on the subject, had those with whom it lay ultimately to determine, posseſsed the means of examining personally into it. It must moreover, be recollected, that the treaty was made, not with the deliberate leisure that Commiſsioners enter on such a buſineſs, during a long interval between two campaigns; and in which, delay is often studied on both sides; but in the very midst of an arduous contest, when the army of our effective ally was absent, and its return uncertain: and finally, we must recollect, that whatsoever the value of the ceſsions might be, both of our allies were satisfied with them. For the allies gave up a calculation of their own, of 260 lacks, and accepted one of 237;* so that it appears on the face of the transaction, that although the claim established by the treaty, was one half of the revenue, yet that it was judged more prudent to negociate the sum at which that half was to be taken, than to preſs a particular statement on the enemy. If therefore it be admitted that Tippoo kept more than half, yet it appears that the allies

* See London Gazette of Nov. 3d, 1792.

thought him sufficiently reduced: and if this was really the case, their original purpose was accomplished.

The extermination of the Mysore power, would not have been sound policy; although a reduction of it was necessary; and the extermination of Tippoo himself, a desireable object. But as the events of war are uncertain, it appears to be the best policy, to make peace when *good terms* can be obtained: without risking a great deal, in expectation of *better*. I hold it pretty certain that if the siege had been prosecuted, Seringapatam must have fallen: but it is not so certain that the fall of that place would have *ended the war*; which at all events, was a principal object, where public gain and loss are calculated. In the present case, the gain (the plunder of the place) would have been to individuals; the loss, (the effect of delay) to the state. As the matter stands, both have acquired very liberal advantages: and perhaps, on the whole, that was the best partition treaty, which made the Mysore sovereign, one of the parties in it. Besides, a brave man, rendered desperate, is capable of doing great mischief, although he may fail to extricate himself from his situation: and it is certain, that men have been saved, merely by their having been urged on to desperation, by their enemies.

The number of forts in the Peninsula, is almost incredible. Accordingly, our acquisitions have brought us a great many of them, of which, some must be garrisoned, many dismantled. In other respects, our acquisitions, those on the Malabar side excepted, make no other difference than removing our frontier to a *greater* distance; and by no means to an *inconvenient* one.

The relief afforded by the removal of Tippoo from our northern frontier, allows us to make greater exertions in the south; where his sphere of action is now so narrowed and exposed, that every design against us, in that quarter, must be undertaken with disadvantage. And we most sincerely hope, that his recent experience of

our ability to distreſs him; together with a conſciouſneſs of comparative weakneſs, in himſelf, ſince he began the conteſt; will induce him to keep that faith, which a ſtate of proſperity and ſtrength too often leads to a breach of: even amongſt thoſe who affect to act under the influence of a milder religion, and purer morals.

SECTION IV.

Of the SITE *and* REMAINS *of the ancient* CITY *of* BEEJANUGGUR. *

THE remains of this city have been visited by an English officer (Lieut. Emmit) so lately as November last. They are situated on the south bank of the Toombuddra River, directly opposite to Annagoondy, which lies about two miles from the north bank; and is at present the principal town of a small district of the same name; the one being the Jaghire (or estate), the other the place of residence of, the descendant of the ancient kings of Beejanuggur, who about two centuries and a half ago, ruled the greatest part, if not the whole of the Peninsula; under the title of the empire or kingdom of CANHARA. The following is Mr. Emmit's account.

" On the N W side of Comlapour fort, distant half a mile, there are a great number of rugged hills covered with pagodas, which have once been very beautiful. This place has been inclosed in strong stone walls on the E side, and bounded by the river on the W. The circumference of the whole, appears to be about 8 miles, though I was told much more. Betwixt the immense piles of rocks crowned with pagodas, I traced several streets from 30 to 45 yards

* In the Memoir of the Map of Hindoostan, this name is corruptly written *Bijinagur*. Beejanug-gur, is Capt. Kirkpatrick's orthography of it, and Bejenagur, that of the author of the View of the Deccan. In Cæsar Frederick, and in most of our Histories, it is written Bisnagar.

wide; some of them now producing fine rice. There is one street remains pretty perfect: it is near the S W angle of the bounds. It extends about N E and S W half a mile; and is about 3,5 yards broad; having colonnades of stone on each side, and a very large pagoda at the S W end, in perfect repair. On the west side of this street, there is a large mango grove, which is bounded by the Toombuddra. There are a number of streams through these ruins, that have formerly been employed to fill a great number of canals, the remains of which, appear all over this once delightful place. I enquired of a number of people, the name of this place; all of whom told me it was called ALLPUTNA. The river at one place, at the foot of these ruins, is only 16 yards wide; below which there has been a stone bridge.

"Comlapour is surrounded with hills. After leaving Comlapour, the road winds betwixt high hills; and in many places leads over considerable heights, the ascents and descents of which are paved with large stones. This road continues 8½ miles from Comlapour; where it enters betwixt two hills, and is not more than 8 feet wide, paved with stones. Here are the remains of a stone gateway, and a watch-house, on the top of a hill, on the east of the road. After leaving the narrow road, the country opens, &c."

According to my friend Capt. Kirkpatrick, Allputna, or Awlputtan, as he finds it written in the Persian character, is the same with Beejanuggur: but it appears odd that the people on the spot should not call it by its original Hindoo name. As Capt. Beatson, two years before Mr. Emmit wrote, had, on the authority of the natives, placed Beejanuggur in the same situation as Awlputtan falls, by Mr. Emmit's observations, there can be no doubt but that the ruins found by the latter, are those of Beejanuggur; besides which, we have the authority of the author of the View of the Deccan, for its being centrical to the district of Annagoondy. [View of the Deccan, page 14.]

We learn from Cæsar Frederick, who visited Beejanuggur in 1565, that it had a circuit of 24 miles; and that it contained within it, a number of hills and pagodas. So that the hills or rocks crowned with pagodas, which were supposed by Mr. Emmit to be situated beyond the boundary of the ancient city, as well as the paved road leading from Comlapour to the pafs; appear to have been within the boundary; and the gate itself, was probably one of the gates of the city.

I conceive that the reason of Tippoo's wishing to retain the circar of Annagoondy, instead of giving it up to the Nizam or the Mahrattas, in common with the rest of the lands in the Dooab, was for the accommodation of the descendant of the ancient kings of Beejanuggur; whose present narrow domain consists of the above circar, which includes the site, and scanty remains of the ancient capital. As we ought ever to suppose a good motive whilst appearances warrant it, Tippoo deserves great credit for his conduct on this occasion. To explain my meaning more fully, I shall transcribe a pafsage from the *View of the Deccan*, published in 1791; and long before the event of the late war could be foreseen.

"Annagoondy claims notice rather from commiseration to the circumstances of its owner, than any political consequence it can be of, in the scale of Tippoo's power. This petty principality, which scarcely extends 20 miles around the spacious ruins of the famed city of Bejenagar, once the capital of the Hindoo empire of the same name, comprehending all the countries south of the Kistnah, is the wretched remains and inheritance of dominion, left to the lineal descendant of Ramraje, the last great monarch of the Canarine and Malabar nations, united 700 years before, under the rule of Kishendeo. The representatives of this family, like the ranas of Oudeypour in Hindostan, lost with their dominions, the superior designation of Maharajah, or Rajah; and have for a century past, been distinguished in the Deccan generally by the title of *Rayeel*. They are said still to keep an exact register of the revo-

lutions which happen within the circle of their former empire; in the vain hope of being reinstated in their ancient rights, though now reduced to a territorial income of about two and a half lacks of rupees, inclusive of the regalities of a mint at Annagoondy; and which they are rather suffered to enjoy through the compassionate bounty or policy of Hyder and his successor, than to hold with absolute independence in their own power. Trifling however, as their revenue is, and how little the merit of the Mysorean's conduct, it is more than they could expect from the exterminating system of the Moghul and his delegates, or from the avaricious principles and national hatred of the Mahrattas, if they had the misfortune of falling within the grasp of either of these governments."

FINIS.

INDEX

TO THE

MAP OF THE PENINSULA.

☞ The whole Map being divided into Squares, or Spaces, by the Intersections of the Parallels of Latitude with the Meridians, each particular Square is pointed out by Letters of Reference, alphabetically arranged along the Margins of the Map; the side Margins having capital Letters, and the top and bottom ones small Letters. For instance, the City of Madras is given in the Index under the Letters E h: and if the eye be guided along horizontally in the Map, from E, until it comes under h, the Square which contains MADRAS will be found.

*** The Names of Countries, or Nations, are in Roman Capitals; and those of Princes, Rajahs, or Chiefs, in Italic Capitals; and such Places as have their Situations described in the Index only (owing to want of room in the Map), are in Italics.

††† Abbreviations.—Terrs. Territories. I. Island. R. River. Pt. Point. Mt. or Mts. Mountain, or Mountains. G. Gaut, or Pass.

A.

Achampata - B f
Acharly - C e
Adam's Bridge. A bank of sand extending from Ramiseram to Manar - I g
ADONI - C e
Adoni - ib.
Adriampatam - H g
Aguada - C a
Ahtore, or Attore - G f
Akarampet - E h
Alempurvé - F h
Alenagur - C g
Algoondy - B c
Allumcollam - K e
Allumbaddy - F e
Alorno - C b
Ambajeedurg - E f
Amboor - E f
Ambravetty R. It passes by Carroor - H f
Ameenbhaur - C c
Aminta - B b
Amutnaur - F d
Anamsagur - B d
Anampilly - C e
Anampour - E c
Anantpour - D e
Anchitiy - F e
Ancola - D b
Ancusgurry, or *Ingusturry*. It lies 10 G. miles to the N W of Kistnagheri F f
St. Andrews - I d
Angcour - I e
Angamale - H d
Angedive - D b
Anguiti Bednore - E e
Anicul - F e
Animally - H e
Anjenga - K d
Annagoondy - C d
Anrodgurry - G f
Arachenoor - G g
Arakeery - F d
Arambauk - E h
Aravacourchy - H e
ARCOT, NABOB of. See CARNATIC.
Arcot - F g
Arcotar - G d
Ardingay - C g
Ardingay - H g
Areg - B c
Arielore - G g
Armegon - D h
Arnee - F g
Attore - G f
Aujypata - C f
Avaco - C b
Autcoor - C f

B.

Baccanore - E b
Baddammy, or Badamgur B c
Baderally - B b
Badramangoody - E d
Bahaderngur - C d
Bahatracally - I d
Baigunapilly - C f
Balaghaut. The TABLE LAND, or Tract situated above the Gauts. See also Payen Gaut.
Balhary or Belhary Great C d
—— Little - C d
Balelcroydroog - F c
BANCAPOUR - C c
Bancapour Sanore - D c
Bandem - C b
Bangalore - F e
Bankipour - B c
Bapatla - C h
Barcelore - E b
Bari - B b
BARRA-MAHAL - F f
Batcole - E b
Battlegunta - H e
Bauglore - F f
Baypour - G c
Beddapollam - E c
BEDNORE - E c
Bednore - ib.
Beejanuggur, ruins of, C d
Beemah R. - C d
Beilore - F d
Beindgheera - C c
Bejapour, the same as Visiapour A c
Belhary, or Balhary - C d
Bellumconda - B b
Beltangaddy - F c
Benaveram - E d
Berapour - B b
Berowly - B b
Betelpour - F d
Bezoara - B h
Bicholim - C b
Bilghey - D b
Bilgilly - B c
Billiapatam - G c
Billiancotta - H c
Biswapour - C f
Bodewal - D g
Bomrauze - E g
BONSOLO - B a
Boodicotta - F f
BOOL or BUL - F c
Bovincoral - G e
Bowany R. - F e
Brinjam - K e

BRITISH POSSESSIONS and ALLIANCES, I d to B h
—— NEW CESSIONS to, In Barra-Mahal - F f
In Calicut - G c
In Dindigul - H e
—— ANCIENT POSSESSIONS.
Jaghire in the Carnatic E h
Guntoor Circar - B h
Buddra R. See Toom.
Bunnoo, or Bunnore - C d
Buntwal - F c
Burcanchery - H d

C.

Cabo - E b
Calacad - K e
Calastri - E g
Calicoulan - I d
CALICUT - G c
Calicut - ib
Callacoil - I f
Callagoody - I f
Calliondroog - D e
Calpenteen I. - K g
Calupar - I e
Calway - D g
Calymere Pt. - H g
Canageri - C g
CANHARA - E b
Cankanelly - F e
Cannanore - G c
CANOUL - C f
Canoul - C e
Carampoondy - B g
Carical - H g
CARNATIC - C g G f
Carnatic Gur - F g
Carongoly - F h
Carpour - G g
Carricoodroo - C h
Carroor - H f
Carroor - E d
Cartinad, or *Cartinaddy*. A Rajahship, situated between Tellicherry and Calicut. Cotapour is the Capital - G c
Carunapaly - I d
Carwar - D h
Carwaree - C h
Carwaree - D g
Cavai - F c
Caudamatris - K h
Cavery R. Source - F c
—— Mouths - G g
Caveripatam - F f
Cavrepauk - F g
CESSIONS from *TIPPOO SULTAN* to the BRITISH, G e, F f, H e. To the MAHRATTAS, C c. To the *NIZAM*, C d, D f
CEYLON - K h
Chandegheri - E g
Changamah - F f
Changlamara - C f
Chanhally - C e
Chatricul - D d
Chedina-Conda - D g
Chenapatam - F e
Chenoor - D f
Chenroypatam - F e
CHERCUL, or CHERICA, - - F c
This country extends from Decla, or Deckul, to Cannanore: its capital is Bilbapatam.
Chevalpettore - I e
Chiandergheri - F c
Chillacalloopour - B h
Chillumbrum - G g
Chinampet - I f
Chinchinmulla - C f
Chingiepur - F h
Chinna-Balabaram - E e
Chintagooduma - B f
Chintapilly - B h
Chintapaleam - B g
Chintamunpet - H f
Chiracole - C a
Chirawalla - C f
CHITTELDROOG - D d
Chitteldroog - ib.
Chittel Pafs - D g
Chittepur - F g
Chittoor - E g
Chitwa - H d
Chitwal - D g
Chorlem - C b
Chowdypollam - G e
Chowgaut - H d
Chucklaghery. The same as Sackeraghery - H e
COCHIN - H d
Cochin - I d
Codwal - C e
Coilurepetta - I f
Coilperta - I e
COIMBETTORE - H e
Coimbettore - ib.
Colamangalum - H e
Colanelly - G e
Colangoody - H d
COLAR - E f

Colar - E f
Colaroone R. - G g
Coleche - K e
Coloor - B h
Colour - E e
Combiconum - H g
Comery - I f
Cometta - D e
Compsey - E c
Comorin Cape - K e
Condacour - C g
Condapilly - B h
Condavir - B h
Condel - C b
Congoondy - F f
Conjeveram - F g
Conjimere - F h
Conniacombry - K e
Coolbar (Balapour) supposed to be intended by Colar - E f
COOMLY - F c
Coomtah - D b
Coondapour - E b
Coonigul - E e
Coonoor - F d
COORG, or Coorga - F c
Coortallum - H f
Corchair - C g
Corcul - E c
COROMANDEL - F h
Corapur - G c
Cotare - K e
Cotiote. A Rajahship situated on the east of Tellicherry: Cotyangary is the capital - G c
Cotta - G c
Cottapatam - I g
Cottapilla - E e
Cottapollam - C h
Cottapollam - E f
Cottapooloor - E h
Cottascveru - D e
Cottacotta - C f
Cotyangary - G c
Coulam - K e
Coulan - K d
Coulanda - G d
Covelong - F h
Coveryporum - G e
Courgegur - E d
Courtallum - K e
Coulydroog - E c
Cranganore - H d
Cuddalore - G g
CUDDAPAH or SEDHOUT - D f
Cuddapah - D f
Cullumbaum - H e
CUMMUM - C g
Cummum - ib.
Cundanahully - F d
Cunatter - I d
Curruhmaur. The same as Cartinad; which see
Cuttagalla - D f

D.

Dallycotta - H e
Dalmachery - H g
Damicotta - G e
Damrajaddy - H f
Danyiicotta. The same as Damicotta - G e
Darampoory - F f
Daraporam. The Province situated on the south of Coimbettore; having a capital of the same name - H e
Daramporam, Great - H e
Daraporam, Little, - ib.
Darmaveram - D e
Darwar - C b
Daupilly - B g
Daywurconda - B f
Decla or Deckul - E c
Deigoody - D f
Denkina - F e
Deodnagur - B e
Deonnella - E e
Depatla - E f
Devicotta - G g
Dewghur - B a
Dhoor - D f
Dilla, M. - G c
DINDIGUL - H e
Dindigul - H f
Divy Pt. - C i
Donyoul - C e
DOO-AB - C c
Doornal - B g
Dornal Pass - D g
Dupaud - C g

E.

Earoor - G g
Edgheer - B e
Eclul. A district on the north of Chercul. - F e
Eercoor. The same as Iliacore - F e
Elaconda Mts. They divide the Nellore and Chittel districts - D g
Elaour - I e
Elatoor - B h
Ellore - B i
Eloremom - E d
Elour - C c
Eratore - F d
Erotah - G d
Erroad - G e

F.

Fringypet - F c
Ferokabad - G c

G.

Gadibunda - E e
Galgala - B c
GANJECOTTA - D f
Ganjecotta, or Gandicotta ib.
Gauts. The edge of the Table Land, from the front of Goa, to Coimbettore, and Palnaud.
St. George - I d
St. George's Islands - C a
Gheriah - B a
Gingee - F g
Goa - C a
Gocock - B c
Gondegama, or Gonlacummum R. - C g
Gonjenpilly - D h
Goodlatore - I e
Goojala - B e
Goondipaleam - B g
Goondul - G d
Goorzala - B g
GOOTY - C e
Gooty - ib.
Gopalchitty - G e
Gouvendungurry - D b
Grammum - F d
GUDUCK - C c
Gujebutty G. - G e
GOOJINDERGUR C d
Goojindergur - ib.
Gumipaleam - E f
Gungaveram - D e
GUNTOOR - B h
Guntoor - ib.
Gunjecotta or Ganjecotta D f
GURRAMCONDA - E f
Gurramconda - ib.
Gutigul - B d
Gutpurba R. - B c

H.

Hamapet - Hg
Hawanoor - Cc
Hegurdencotta - Fd
Hendery R. - Dd
HERPANELLY - De
The position of the *Town* of this name, not known.
Hillegurry - - Ed
Hogenpour - Ed
Hoobly - Cc
Hooleardurgam - Fe
Hooly-Onore - Ec
Hosangry - Eb
Hurdonelly - Ge
Hurryhur - Dc
Huttany - Ac
Hydergur - Ec
Hydrabad - Af

I. J.

Jafnapatam - Ih
JAGHIRE, E. I. Company's in the Carnatic. - Eh
Jahehaul - Cd
Jegadivy - Ff
Jemalmurroo, or Jemalmuraag. - Df
Iliacore - Fc
Ingushurry, or *Ancusgurry* 10 miles N W of Kistnaghery - Ff
Injamour Conda - Dg
Innaconda - Bg
Intour - De
Intpola - Cf
Iyeghur or Zyghur - Aa
Up this River, the Bombay detachments landed.

K.

Kavai, or Cavai, - Fc
Kajypet - Df
Kanambaddy - Fd
Kaneekgurry - Cd
Kellinellicotta - Hg
Kerpah. The same as Cudapah - Df
Kerroo - Bc
Kilkare - If
Kiranoor - Hf
Kistnah R. - Bc
——— Mouth of - Ch
Kistnabaram - Df
Kisnagheri - Ff
Kistnapatam - Dh
Kistnaporum - Bg
Kittoor - Cb
Koosgul - Cc
Kooshalnagur - Fd
Kopaul - Cd
Kumilapour - Df
KOUMBUL. The same as COOMLY - Fc

L.

Lingalla - Bf
Lingalla Peintilly - Cf
Lingumpilly - De
Lolgeery - Cc
Lackritapilla - Df
Lackrycotta - Hd
Luckmaseer - Cc

M.

Macherla - Bg
Madgurry, or Mudgurry Ee
Madogary - He
Madoor - Fe
Madras - Eh
MADURA - If
Madura - If
Magalaconda - Ef
Magalawaukel, or Malwaukel - Ef
Maggeri - Fe
Mahé - Gc
MAHRATTAS, new CESSIONS to - Cc
Mahrauzedurgam - Ff
MALABAR - Hc
Malakery - Fe
Malbary - Bc
Mallesundrum - Gf
Malletur - Hd
Malpurba R. - Bc
Mallyoor - Hf
Malwaukel - Ef
Mallyoor - He
Mamelgeri - Ic
Manapar - Kf
Manar I. - Ig
Mancaseram - Fb
Mangalore - Fb
Manganada - Hd
Mangrecota - Hd
Manorgoody - Hg
Manouly, or Nanouly - Cc
Marateollam - Gc
MARAWARS - If
Masulipatam - Bi
Mallaver, vulg. Muttelwar, the same as Chittel Dg
Matteloy - Fc
Maverirum - Gg
Maunair R. - Cg
Melore - If
Melundy - Ba
Mentole - Ih
Mercara - Fc
Merjee - Db
Merritch - Bb
Milgota - Fd
Misriacotta - Cc
Moka - Ce
Molodive - Ii
Mongalgary - Bh
Montana - Ge
——— Gaut - Gd
Mooamilladuru - Dh
MOODGUL - Cd
Moodgul - Cd
Moodul - Bc
Moodynoor - Cd
Moolily - Fe
Moongal - Ag
Mooryconda - Cf
Mootapilly - Ch
Mosa, or Musi R. - Ag
Mudgurry, or Madgurry Ee
Muglee - Ef
Mulky - Eb
Mullavilly - Fc
Mullincotta - Ke
Mungalum - He
Mungulpetta - Eg
Munnar G. - Gd
Muntraul - Cf
Musi, or Mosa R. - Ag
Musturi - De
MUTTELWAR. The same as Chittel Dg
Mutupollam - Gg
MYSORE - Fd
Mysore - Fd

N.

Naggery - Eg
Nagore - Hg
Naid - Eh
Nakarakul - Bg
Namcool - Gf
Nandedurg - Ee
Nandygama - Bh
Nandyaul - Cf
Nanouly, or Manouly Cc
Narnaveram - Eg

Nattam - H f
Navapour - E b
Naugamungalum - F d
Naugutmady - D e
NAYRES. The people of the Calicut province, generally - G c
Negapatam - H g
Nelisuram - F c
Nellore - D g
Nengengoode - F d
Nerinjapetty - G e
Newtee - C a
Nilgoonda - A g
NAZAM ALLY, CESSIONS to - C d, D f
Nizampatam - C h
NOURGAL - B o
Noyel R. - G e
Nundycoonda - B g
Nurgoond - C c
Nyarpet - E g

O.

Olinda Pass - D g
Olloor - D h
Omelloor - I e
Ongole - C g
Onore - D b
Oodeadurgam - F f
Oodimally - H e
Oospetta - C d
Ooterawoody - H e
Ootampaliam - I e
——— valley of - ib.
Ootatore - G f
Oucara - G e
Ouscotta - E e
Oussoor - F e

P.

Pacheapollam - G e
Pahvitram - G f
Pairumbaukum - E g
Palamcota (*Tinevelly*) K e
Palamcota. About midway between Chillumbrum and Warriore - G g
Palamnaire - E f
Palapetty - H f
Palatchy - H e
Palgatchery, or Palicaud H d
Paliacur - I h
Paliar R. - F h
Palicaud, or Palgatchery H d
Paliconda - F g
Palimerdy - I f
Pallicode Pass - F f
PALNAUD - B g
Panamgoody - K e
Pan-aur R. - F g
Panella - A c
Paniany - H c
Pannyellumcrutch - K f
Papanassum - K e
Parengoody - I f
Parmulla - G c
Paroor - H d
Patinoor - I f
Pattyconda - C e
Paugtoor - B e
Paumoor - C g
Paungul - B f
Payen-Gaut. The tract below the Gauts, or Table Land.
Pedda Balabaram - E e
Pedda-Balapour - E e
Peddinaigue. Between Amboor and Vencatigheri. E g
Pedro Pt. - I h
Pelicaree - H d
Pendarty - C h
Pennar R. - D h
Penuconda - D e
Perentory - G e
Periapatam - F d
Periapatam - I g
Periapollam - E h
Periacullam - H e
Permacoil - F g
Permutty - G f
Perperengarde - G c
Perour - D e
Petapoly - C h
Pettacotta - H g
Pigeon I. - D b
Pilleer - E g
Pinagra - F f
Podalcour - D g
Polipet - E g
Polore - F g
Ponaron - G g
Ponda - C b
Pondichery - G g
Poodcaud - H d
Poodicherrum Gaut F c
Poodacotta - H f
Poolareddy - B g
Poolytopu - K e
Poonamalee - E h
Porcah - I d
Pormamella - C g
Portonovo - G g
Poudagoody - H f
Puducotta - H f
Pudula - C g
Pulcumuru - C g
Pulicate - E h
Pulny, or Pyalny - H e
Punganore - E f
Purgot - G d
Purrawuttum - B f
Pyalny, or Pulny - H e

Q.

Quilandy - G c

R.

Rachol - C b
Rachore, or Rychore B e
Rachoutree - D f
Raibaug - B o
Rajapour - B a
Rajapilla - D e
Ramanadoorgam - C e
Ramanadapooram - I g
Ramanchery - E g
Ramas, Cape - C b
Rameeapatam - C h
Rameesaram - D f
Ramgaut - C b
Ramgiry - F e
Ramgiry - H d
Ramiseram I. - I g
Ramnautpour - F d
Rampour - D g
Ramtabad - D g
Ranny Bednore - D c
Rary - C a
Rate - D e
Ravetnellore - G g
Rettinghery - D e
Reyoor - B h
Romaneah - E h
ROYDROOG - D d
Roydroog - D d
Rutnaghery - A a
Ryacota - F f
RYCHOOR, or RACHORE B e
Rychoor, or Rachore B e
Rymabad - E f

S.

Sackeraghiry - H e
Sacrapatam - E d
Sairgaipilla - D f
SALEM - G f
Salem - ib.
Samissuram - D g
SAMORIN. The Calicut

Rajah; or Prince of the Nayres.
Sandole - C h
Sangam - D g
Sangurry - E d
Sanguem - C b
Samiam Sagur - B e
Sanore, or Shanoor (Bancapour) - C c
Sarapilly - D g
Satrum - I f
Sattimungalum - G e
Savindroog - F e
Sautgur. About 9 miles to the northward of Amboor - F f
Seetarampour - C g
Sedasheggur - D b
SEDHOUT or CUDDAPAH - D f
Sedhout - D g
See-aur R. - F g
Seergoompty - C d
Seerway - E e
Selon - G g
Senkergur - G e
SERA - E d
Sera - ib.
Seretty - C c
Seringapatam - F d
Serowly - D b
Seven Pagodas - F h
Shadmungul - G f
Shangrapoye - I f
Shanoor, or Sanore (Bancapour) - C c
Shatore - I e
Shaumoga R. by Pyalny H e
Sheer Mahomed Pet B h
Shencotty - I e
Shevagunga - E f
Shevagunga - I f
Shevagurry - I e
Shially - G g
SHILA NAIK - G f
Sholavanden - I f
Sholingur - E g
Showoor - G e
Siccacollum - B h
Sidapour - C f
Siddapour - F d
Signapour - B c
Simoga - E c
Singanellore - H e
Singarpetta - F f
Sipeer - C i
Sirclaire R. - D g
Sirpi - E d
Skeveri - B b
Solapour, or Sororpour B d
Soomsilly - C f
SOONDA - D b
Soonda - ib.
Soondy - C g
Soorurpour, or Solapour B d
Sournamaky R. - E g
Sultanpetta - F e
Sunkergur, or Sankerydurg G e
Surgour - F e
Sydaporum - D g

T.

Tademeri D e
Tadepatry, or Tarputtry D f
Taiveram - I e
Talgul - E d
Tamberchery - G d
——— Pass - ib.
Tambray - I e
Tangada - B g
TANJORE - H g
Tanjore - ib.
Tannore - H e
Tapoor - G f
Tarputtry, or Tadepatry D f
Tavilcar - K d
Tellichery - G e
Tengapatam - K e
Termally - D e
Ternalla - D e
Ternavay - H d
Terriore - G f
Tertalla - H d
Tervanagary - G c
Tiagar - G g
Tierdill - B c
Timerycotta - B g
Timmapoorum - F f
TINEVELLY - K e
Tinevelly - ib.
Tingrecotta - F f
TIPPOO SULTAN, territories of, - D d
Tiramungalum - I f
Tondy - I g
Tontravelore - B h
Toombuddra R. - C d
Toom R. It passes by Simogu, and joins the *Buddra* at Hooly-Onore E c
Toodry - D b
Totium - G f
Tourancourchy - H f
Tranquebar - G g
TRAVANCORE - I d
Travancore Lines H d
Trichoor - H d
Trinomaly - F g
Tripafiore - E h
Tripanty - B g
Tripatore - F f
Tripetty - E g
Tripettore - H f
Tripoor - G e
Tritany - E g
Tritchinopoly - H f
Trivadi - G g
Trivalore - H g
Trivatore - - F g
Trivenellore - G g
Trumain - H f
Turlapaud - C g
Tutacorin - K f

U, V.

Vackaleer - E f
Vadagary - I e
Vaddal - C b
Vaniambaddy, Valley of, the same as Barra-Mahal F f
Vaniambaddy - F f
Vayloor - G f
Udagheri - D g
Uderipconda - D e
Veerapachry, or Veerapatch H e
Veerapandy - I e
Vel-aur R. - G g
Veliadu - K e
Vellady - G e
Vellum - H g
Velore - F g
Vencatigheri - E f
Vencatigheri - E g
Vencatampilla - D e
Ventapolfam - C h
Verabadurg - F f
Veramally - H f
Veroor - C g
Veypar - I f
Viatore or Vytore - F c
Vieryvandy - F g
Vigee R. by Madura - I f
Villaporum - G g
Visiapour, or Viziapour A c
Underdengarde - G d
Volconda - G g
Vytore, or Viatore F c
——— Gaut. About 3 miles to the N W of Poodicherum - F o

W.

Wandiwash F g
Warriapour B g

Warriore	G g	**Y.**		**Z.**	
Wa[illegible]ara	F c				
W[illegible]mpilly	D t	Yal[illegible]oorty	C e	*ZAMORIN.* See *SAMORIN*	
W[illegible]mbrellore	G f	Y[illegible]a[illegible]ta	H e		
W[illegible]	E t	Yetcherlapand	C a	Zyghur, or Jyeghur	A a
Wrooyeotty	D b				

ERRATA.

Page 6. line 3, read, *are.*

8. line 4, a *comma* after *distance.*

15, read, *Allputna.*

10. line 17, read, *or Rarbaug.*

12. Notes, line 3 from bottom, read, N W by N from *Tademeri.*

32. The two last lines of the Notes, are transposed, and partly jumbled together. Read, *Total of the Cessions, about 39½ lacks of pagodas: so that Tippoo's whole Revenue, &c.*

33 line 2, read *sufficient.*

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OF

ASTRONOMICAL OBSERVATIONS,

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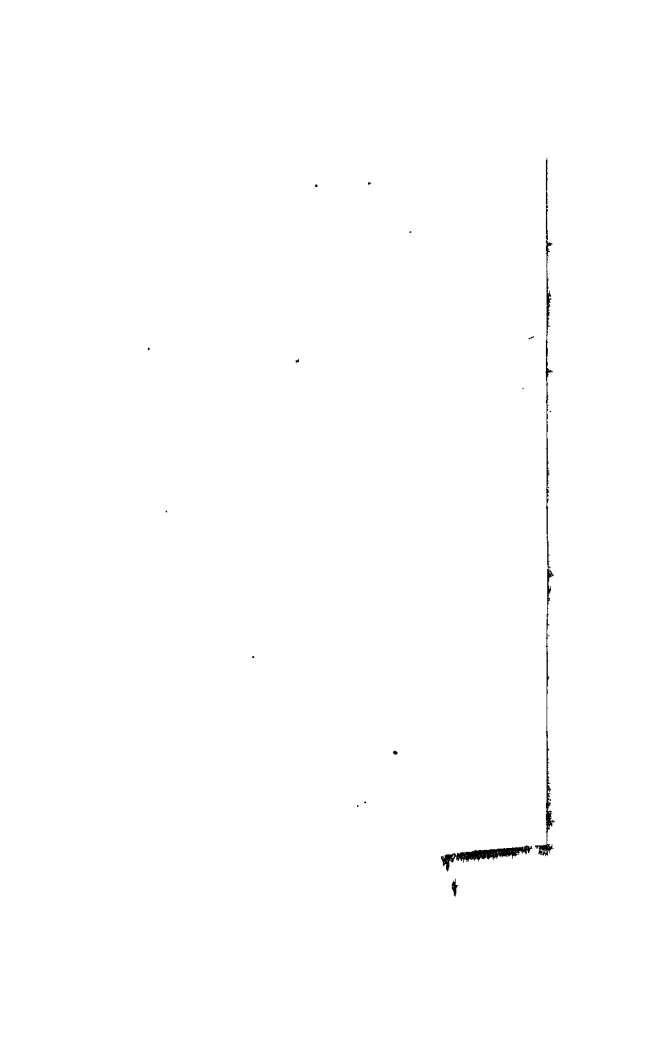
* TEACHER of NAVIGATION and the LUNAR OBSERVATIONS, Prospect Row, Dock Head, Rotherhithe.



SLAVE LAKE. *By Mr.* PHILIP TURNOR, *in* 1791.

AT the WEST BRANCH of the SLAVE RIVER, which is S. 33° 38′ W. distance 21,73 miles from the CANADIAN SETTLEMENT.

Latitude by meridian altitude	61° 16′ 39″ N.
July 19th. 8 distances of Aquilæ and ☽, the ✱ W... Longitude from Greenwich	113 19 15 W.

At the CANADIAN SETTLEMENT 1791, SLAVE LAKE.

Latitude by 2 meridian altitudes ..... mean	61 26 25 N.
Longitude W. from Greenwich, by 69 dist. of ☉ and ☽, the ☉ E. in 7 sets, mean	112 50 04 W.
Aquilæ W. of ☽, taken at the West Branch of the Slave River 113° 19′ 15″ from which deduct 13′ 36″ of longitude for the easting, made between the two places of observation, will leave 113° 5′ 39″, which will give for the mean longitude at the Canadian Settlement	112 57 30 W.

ATHAPESCOW LAKE, *about* 600 *yards S. W. of* FORT CHEPAWYAN, *and about* 7 *miles E. N. E.* ½ *E. from the East Branch of the* ATHAPESCOW LAKE. *By Mr.* PHILIP TURNOR, *in the Year* 1791 *and* 1792.

Latitude by 6 meridian altitudes of the ☉'s lower limb, ... mean	58 37 44 N.
Longitude W. of Greenwich, by 50 dist. of ☉ and ☽, the ☉ E. in 5 sets, 110° 14′ 33″	
Longitude W. of Greenwich, by 100 dist. of ☉ and ☽, the ☉ W. in 11 sets, 110 27 43	
Mean 110 21 08	
Long. W. of Greenwich, by 138 dist. of ✱ and ☽, the ✱ E. in 14 sets, 110 24 14	
Long. W. of Greenwich, by 110 dist. of ✱ and ☽, the ✱ W. in 11 sets, 110 34 22	
Mean 110 29 18	
Mean of the whole	110 25 13 W.

ATHAPESCOW LAKE, *Mouth of* STONY RIVER.

August 31, 1791. Latitude by meridian altitude of the ☉'s lower limb	59 16 22 N.
Mean longitude by 21 distances of the ☉ and ☽, the ☉ E. in 3 sets, ...	105 26 00 W.

ISLE LA CROSS. *By Mr.* PHILIP TURNOR, *in* 1790 *and* 1791.

Latitude by 5 meridian altitudes of the ☉'s lower limb, mean	55 25 43 N.
Long. W. from Greenwich, by 78 dist. of ☽ and ☉, the ☉ E. in 8 sets, 107 42 50	
Long. W. from Greenwich, by 206 dist. of ☉ and ☽, the ☉ W. in 23 sets, 107 49 17	
Mean 107 46 03	
Long. W. from Greenwich, by 195 dist. of ✱ and ☽, the ✱ E. in 23 sets, 107 43 37	
Long. W. from Greenwich, by 152 dist. of ✱ and ☽, the ✱ W. in 18 sets, 107 52 57	
107 48 17	
Mean of the whole	107 47 10 W.

Note. The meridian altitude is always to be understood the double meridian altitude.

HUDSON's HOUSE. *By Mr.* PHILIP TURNOR, *in* 1779.

Latitude by 4 meridian altitudes, mean .....

Longitude W. of Greenwich, by 32 dist. of ☉ and ☽, the ☉ W. mean 106° 35′ 4
Longitude W. of Greenwich, by 12 dist. of ✳ and ☽, the ✳ E. mean 106 36 4
Longitude W. of Greenwich, by 12 dist. of ✳ and ☽, the ✳ W. mean 106 01 0

Mean of ✳ and ☽ 106 18 5
Mean of the whol

CUMBERLAND HOUSE. *By Mr.* PHILIP TURNOR, *in* 1778 *and* 179

Latitude by 14 meridian altitudes of the ☉'s lower limb, mean .....
Long. W. of Greenwich, by 149 dist. of ☉ and ☽, the ☉ E. in 17 sets, 102° 17′
Long. W. of Greenwich, by 191 dist. of ☉ and ☽, the ☉ W. in 21 sets, 102 14

Mean of ☉ and ☽ 102 15
Long. W. of Greenwich, by 201 dist. of ✳ and ☽, the ✳ E. in 26 sets, 102 00
Long. W. of Greenwich, by 112 dist. of ✳ and ☽, the ✳ W. in 16 sets, 102 22

Mean of ✳ and ☽ 102 11
Mean of the w

YORK FORT. *By Mr.* PHILIP TURNOR, *in* 1778 *and* 1779.

Latitude by 4 meridian altitudes of the ☉'s lower limb, mean .....
Long. W. of Greenwich, by 46 dist. of ☉ and ☽, the ☉ E. in 5 sets, 92° 5
Long. W. of Greenwich, by 20 dist. of ☉ and ☽, the ☉ W. in 3 sets, 91 5

Mean of ☉ and ☽ 92 2
Long. W. of Greenwich, by 7 dist. of ✳ and ☽, the ✳ E. 93 2
Mean of the

MOOSE FORT. *By Mr.* PHILIP TURNOR, *in* 1779, 1780, 1781 *and*

Latitude by 8 meridian altitudes of ☉'s lower limb, mean .....
Long. W. of Greenwich, by 105 dist. of ☉ and ☽, the ☉ E. in 10 sets, 81° 03′
Long. W. of Greenwich, by 75 dist. of ☉ and ☽, the ☉ W. in 8 sets, 80 52

Mean by ☉ and ☽ 80 58

Long. W. of Greenwich, by 54 dist. of ✳ and ☽, the ✳ E. in 6 sets, 80 44
Long. W. of Greenwich, by 40 dist. of ✳ and ☽, the ✳ W. in 5 sets, 80 43

Mean by ✳ and ☽ 80 44

Longitude W. of Greenwich by the *Immersions of Jupiter's Satellites*.

1781.	March 26.	I. Satellite *dubious*	81° 21′ 45″	
	April 27.	I. Satellite	80 54 45	
1782.	Feb. 4.	I. Satellite	80 57 00	
	May 16.	I. Satellite	80 49 30	Mean . .
	March 10.	II. Satellite	81 06 30	
	Feb. 26.	III. Satellite	81 03 15	
	May 16.	III. Satellite	80 56 15	Mean of th

ALBANY FORT. *By Mr.* PHILIP TURNOR, *in* 1780.

Latitude by 5 meridian altitudes of the ☉'s lower limb, mean	52° 14′ 40″ N.
Long. W. from Greenwich, by 19 dist. of ☉ and ☽, the ☉ E. in 3 sets, 82° 15′ 20″	
Long. W. from Greenwich, by 25 dist. of ☉ and ☽, the ☉ W. in 3 sets, 81 58 25	
Mean by ☉ and ☽ 82 07 07	
Jan. 21. Long. W. from Greenw. by Immer. of Jupiter's 1st. Satellite, 82 02 45	
Feb. 6. Long. W. from Greenw. by Immer. of Jupiter's 1st. Satellite, 82 06 30	
Mean by Immersions of Jupiter's 1st. Satellite 82 04 37	
——— Long. W. from Gr. by 18 dist. of ☿ and ✳, the ✳ W. in 3 sets, 81 48 10	
Mean of the whole	81 59 58 W.

HENLEY HOUSE. *By Mr.* PHILIP TURNOR, *in* 1780.

Latitude by 4 meridian altitudes of the ☉'s lower limb, mean	51 14 27 N.
Long. W. of Greenwich, by 46 dist. of ☉ and ☽, the ☉ W. in 5 sets, 85° 12′ 05″	
Long. W. of Greenwich, by 18 dist. of ✳ and ☽, the ✳ E. in 2 sets, 84 56 37	
Long. W. of Greenwich, by 14 dist. of ✳ and ☽, the ✳ W. in 2 sets, 85 02 52	
Mean by ✳ and ☽ 84 59 44	
Mean of the whole	85 05 54 W.

GLOUCESTER HOUSE. *By Mr.* PHILIP TURNOR, *in* 1780.

Latitude by 5 meridian altitudes of the ☉'s lower limb, mean	51 24 26 N.
Long. W. of Greenwich, by 36 dist. of ☉ and ☽, the ☉ E. in 4 sets, 87° 20′ 19″	
Long. W. of Greenwich, by 6 dist. of ✳ and ☽, the ✳ E. in 1 set, 86 35 45	
Long. W. of Greenwich, by 6 dist. of ✳ and ☽, the ✳ W. in 1 set, 86 20 45	
Mean by ✳ and ☽ 86 28 15	
July 11th Long. W. of Greenwich, by Emersion of Jupiter's 1st Satellite, 87 09 15	
Mean of the whole	86 59 16 W.

EAST MAIN HOUSE. *By Mr.* PHILIP TURNOR, *in* 1781.

Latitude by 3 meridian altitudes of the ☉'s lower limb, mean	52 15 00 N.
Long. W. of Greenwich, by ☉ and ☽, the ☉ E. ..... 79° 11′ 00″	
Long. W. of Greenwich, by ☽ and ✳, the ✳ W. 78 13 00	
Mean of both	78 42 00 W.

BRUNSWICK HOUSE. *By Mr.* PHILIP TURNOR, in 1781 *and* 1784.

Latitude by 7 meridian altitudes of the ☉'s lower limb, mean . . . . . 5[illegible]

Long. W. from Greenwich, by 15 dist. of ☉ and ☽, the ☉ E. in 2 sets, 82° 17' 1[illegible]

Long. W. from Greenwich, by 58 dist. of ☉ and ☽, the ☉ W. in 6 sets, 82 21 5[illegible]

Mean by ☉ and ☽ 82 19 3[illegible]

Long. W. from Greenwich, by 21 dist. of ☽ and ✳, the ✳ E. in 2 sets, 83 04 0[illegible]

Long. W. from Greenwich, by 20 dist. of ☽ and ✳, the ✳ W. in 2 sets, 82 21 3[illegible]

Mean by ☽ and ✳ 82 42 4[illegible]

Mean of the whole 82 31 1[illegible] W.

ABBITIBBE RIVER, *at the* JUNCTION *with the* PUSQUACHAGAMAY RIVER. *By Mr.* PHILIP TURNOR, *in* 1784 *and* 1785.

Latitude by 3 meridian altitudes of the ☉'s lower limb, mean . . . . . 49 [illegible]

Longitude W. from Greenwich, by 5 sets of ☉ and ☽, the ☉ E. mean . . 81 [illegible]

FREDERICK HOUSE. *By Mr.* PHILIP TURNOR, *in* 1785, 1786 *and* 1787.

Latitude by 3 meridian altitudes of the ☉'s lower limb, mean . . . . . 49 [illegible]

Longitude W. from Greenwich, by 6 sets of ☉ and ☽, the ☉ E. mean . . 82 [illegible]

MISSINABE LAKE, *at the* LATE SETTLEMENT. *By Mr.* PHILIP TURNOR, 1787.

Latitude by 5 meridian altitudes of the ☉'s lower limb, mean . . . . . 49 [illegible]

Longitude W. from Greenwich, by 20 dist. of ☽ and ✳, the ✳ W. in 2 sets, 84 [illegible]

Single Observation between CUMBERLAND HOUSE *and the* SLAVE LAKE.
By Mr. PHILIP TURNOR, *in* 1790 *and* 1791.

	LATITUDE.
Near the Sturgeon Weare-Fall	54° 18′ 33″
Entrance of Beaver Lake	54 25 10
Near the Birch Carrying Place	54 50 23
Great Fall Carrying Place	55 22 33
Neekeak, or Otter Carrying Place	55 39 28
Devil's Carrying Place	55 40 14
Tickameg Lake	55 41 05
Entrance of Knee Lake — Longitude 106° 38′ 50″	55 50 56
At a Carrying Place of 450 yards nearly, N. of Isle la Cross	55 57 24
At another Carrying Place 360 yards to the westward of Isle la Cross	56 00 13
At a small Island on Isle la Cross Lake	55 40 00
On the West Coast of Buffalo Lake	55 54 35
Entrance of Swan Lake — Longitude 109° 22′½	
Three miles west of the above Point — Longitude 109° 43′½	56 18 15
Carrying Place between Swan Lake and another small Lake which is the Land's height that divides the Waters	56 15 21
At a Branch on the Red Willow River which comes from the south west	56 01 46
Small Rapid on the Red Willow River	56 15 00
Head of the Rapids on the Red Willow River	56 27 16
Foot of the Rapids on the Red Willow River	56 35 35
On a small Island after entering the Athapescow River about 3 miles	56 45 26
On the Athapescow River opposite a small Creek	57 29 26
At *a* on the Athapescow Lake	58 47 56
At *b* on the Athapescow Lake	59 00 00
At *c* on the Athapescow Lake	59 05 16
At *d* on the Athapescow Lake	59 24 15
At *e* on the Athapescow Lake	59 07 47
At *f* on the Athapescow Lake	59 16 12
At *g* on the Athapescow Lake	59 09 22
At *h* on the Athapescow Lake	59 21 23
At *i* on the Athapescow Lake — Longitude 107° 17′½	59 14 14
On the Slave River	59 04 06
At Strong Rapid on the Slave River	59 17 30
On the Slave River	59 38 38
Head of the Falls where the Dog River falls into the Slave River, Long. 111° 30′	59 51 29
Great Fall Carrying Place	60 00 03
On Slave River	60 21 37
On Slave River — Longitude 112° 33′ 22″	60 31 35
On Slave River	60 33 10
On Slave River — Longitude 112° 23′	60 35 47
On Slave River	60 42 40
On Slave River	61 11 05
On Slave River	61 13 42

Between MOOSE FORT *and* LAKE SUPERIOR.

1781. Nearly the middle of Mecowbanish Lake on the Eastern Shore . . . .
Mishipicoten . . . . . .

Between MOOSE FORT *and* ABBITIBBE, TEMISCAMAIN, &c.

1782. Plumb Pudding Island in Abbitibbe River . . . . . .
Abbitibbe River at the Mouth of Abbitibbe Lake . . . . . .
Abbitibbe River, Longitude from Greenwich, ... 80° 02' W.
One mile from the Abbitibbe Lake . . . . . .
Longitude of Abbitibbe Lake . . . . . 79° 05' W.
The Canadian Settlement at Abbitibbe Lake . . . . . .
The Canadian Settlement at Abbitibbe Lake, Long. from Green 79° 09' W.
Mesuckamy Lake where the Track enters from the Athacana River . . .
At a Point on the West Shore of Mesuckamy Lake, formed by a small Bay . . .
1787. Soweyawamineca Canadian Settlement . . . . . .
Upatchawanau, or Temiscamain Canadian Settlement . . . . . .

Between YORK FACTORY *and* CUMBERLAND HOUSE, *by the Way of* PORT NELSON'S RIVER.

1778. At the First Two Islands up Port Nelson's River . . . . . .
One Mile North of Hell Gate Fall . . . . . .
On the Fourteenth Carrying Place (Length 150) . . . . . .
The First Carrying Place above the Gull Lake . . . . . .
The Cliff Carrying Place in Little Grass River . . . . . .
Near the East End of the large Island in the Lake below Grass River and near the Mouth of the River . . . . . .
At a Point near the Middle of the Lake below Sweet Herb Lake . . . . . .

Between YORK FACTORY *and* CUMBERLAND HOUSE, *by Way of* HAYES'S RIVER.

1779. On the South Side of the Devil's Drum Island . . . . . .
In the Cader Lake, about 4 miles N. W. by N. of the Long Point . . . .
At the Upper End of the Short Carrying Place of the Great Rapid, above Lake Winnipeg . . . . . .

		LATITUDE.
1779.	At the small Bay at the Bottom of the Great Rapid	53° 14′ 00″ N.
	About 10 miles from the N. W. Point of the Sandy Bay, Lake Winnipeg	53 51 00 N.
1792.	About 13 miles N. W. of the above Point	53 49 00 N.
	The Mossy Point in Lake Winnipeg S. E. by E. 3 miles	58 33 30 N.
1779.	Buscascagan, or Play Green	53 53 00 N.
	Painted-stone Carrying Place	54 26 00 N.
	On the Lower End of the White Fall Carrying Place	54 28 00 N.
	In the Knee Lake, about 10 miles N. of the Knee	55 06 00 N.
	In Hayes's River, 4 miles N. of Steel River Point	56 26 00 N.
	At the Mouth of the Sitting River (Saskashawan River)	53 10 00 N.
1781.	Rupert's River House	51 29 27 N.
1791.	Junction of the Wawashagummow, or Clear Water River, with the Red Willow River	56 39 00 N.
	3½ miles west of the Back Road	56 42 00 N.
	3½ miles east of the Back Road	56 41 37 N.
	North Side of the Methy Carrying Place	56 42 04 N.
	Entrance of the Methy Lake	56 23 20 N.
	North End of the Methy Lake	56 33 20

Latitude observed by Mr. Mc KENZIE, *in* 1789. *Extracted from his Original.*

	Canadian Settlement	61 28 00 N.
	Big Island in the Slave Lake	61 34 00 N.
	At an Island in the Slave Lake, a Canadian Settlement	62 24 00 N.
	In Mc Kenzie's River	67 47 00 N.
	Entrance of the North Sea	69 01 00 N.
	Whale Island	69 14 00 N.

Result of Observations made by Mr. WILLIAM WALES, Mathematical Master *to* Christ's Hospital, *in his Voyage to* HUDSON'S BAY, *for the Observation of the* TRANSIT *of* VENUS, *in* 1769.

Cape Resolution	61° 29′ 00″ N.	65° 16′ 00″ W.
Saddle Back Island	67 07 00	68 13 00
Upper Savage Islands	62 32 30	70 48 00
Cape Charles	62 46 00	74 15 00
Salisbury Isle	63 29 00	76 47 00
Cape Wostenholme	62 39 00	77 48 00
Cape Digges	62 41 00	78 50 00
North End of Mansel Island	62 38 30	80 33 00
Churchill	58 57 32	94 12 30

LATITUDES *Observed by Captain* HANWELL, *in* HUDSON'S BAY.

South End of Mansfield Island	61° 35″
Cape Pembroke	63 00
Caryswans Nest	62 25
Cape Southampton	62 10
Cape Smith	60 52
North Sleepers	62 08
West Sleepers	59 08
Belchers, from to	56 20 / 56 10
Cape Henrietta Maria	55 10
North End of North Bear	54 37
South Bear	54 25
Gasket Rock	54 13
North West End of Agoomska	53 34
North East End of Agoomska	53 32
South East End of Agoomska	52 50
North End of North Twin	53 30
South End of South Twin	53 12
North-most Westons	52 46
South-most Westons	52 39
South-most Tides	52 20
Gasket Shoal	52 28
Charlton Isle	51 55
Outer Buoy 5 leagues east of North Bluff	51 38

BUCKINGHAM HOUSE. *By Mr.* PETER FIDLER, *in the Years* 1792 *and* 1793.

10 Meridian altitudes of the ⊙'s lower limb, mean	53° 51′ 35″ N.
From. November 3d, 1792, to May 20th, 1793.	
61 Distances of the ⊙ and ☽, the ⊙ west, . .	
86 Distances of the ⊙ and ☽, the ⊙ east, . . .	
20 Distances of the ✳ and ☽, the ✳ west, . . Mean of all	210 51 23 W.
28 Distances of the ✳ and ⊙, the ✳ east, . . . Variation	18 00 18 E.

RED DEER RIVER, 1792.

Novem. 19th. Meridian altitude of the ⊙'s lower limb	52 21 25 N.
30 Distances of ⊙ and ☽, ⊙ west, mean	113 15 00 W.

At a Place 10 *miles* N. N. E. ½ E. *of* ASKOWSEEPEE; *or*, BAD RIVER, 1792.

Decem. 8th. Meridian altitude of the ⊙'s lower limb	50 00 35 N.
20 Distances of ⊙ and ☽, the ⊙ east, ...	111 12 45 W.

At STOMMIX E PIS CON NEE HEAT TAT TI; *or*, BULL BUFFALO POND RIVER; *the Rocky Mountains bearing* S. W. *distant about* 12 *miles.*

January 16th. Meridian altitude of the ⊙'s lower limb	50 23 33 N.
17th. Variation	17 51 45 E.

At a Place near the Head of STOMMIX E PIS CON NEE HEAT TAT TI; *or*, BULL BUFFALO POND RIVER, *the Rocky Mountain bore* S. W. ¾ W. *distant* 6 *miles.*

Latitude	50 23 39 N.
32 Distances of ⊙ and ☽, the ⊙ west, ...	114 24 19 W.

Mr. FIDLER went from this place E. S. E. 4 ½ miles, then S. by W. 12 miles, S. S. W. 14 miles, S. W. by S. 3 miles, and lastly, west 1 ½ mile, and then arrived at the Tents of the CATTANAHOWES, 3 miles within the Stony Mountain, on December 31, 1792, where he observed the latitude to be 49° 52′ 03″, and then returned. The Stony Mountain is therefore in longitude 114° 47′ 19″ west.

On the SASKACHAWAN RIVER, 62 *leagues West of* MANCHESTER HOUSE, *and* 37 *leagues West of* BUCKINGHAM HOUSE, 1793.		
April 6th. 30 Distances of the ☉ and ☽, the ☉ east,		113° 35′ 58″
From this place Mr. FIDLER went S. by W. 9 miles, and on April 7, observed the sun's meridian altitude, which gave the latitude of the place he was then at		53 45 47 N.
So that the latitude of the place on the Saskachawan River, where the foregoing longitude was observed, must have been		53 53 37 N.
And the longitude of this latter place where the latitude was observed was		113 43 22 W.
MANCHESTER HOUSE, *situated on the* SASKACHAWAN RIVER, *and* 25 *leagues to the eastward of* BUCKINGHAM HOUSE.		
1792, October 4th, and 1793, May 30th, from 2 meridian altitudes of the ☉'s lower limb		53 14 18 N.
CHATHAM HOUSE, *&c. By Mr.* DAVID THOMPSON, *in the Years* 1792 *and* 1793.		
Latitude by 5 meridian altitudes of the ☉'s lower limb, mean		55 23 40 N.
Long. west of Greenwich, by 9 sets, of ☽ and ✳, the ✳ east, 97° 37′ 32″		97 48 4 W.
Long. west of Greenwich, by 5 sets, of ☽ and ✳, the ✳ west, 97 59 51		
Play Green, or Pascacogan,		53 53 00 N.
Play Green, or Pascacogan, longitude west, 97 54 00 W.		
The East End of White Fall Carrying Place		54 25 0 N.
The East End of White Fall Carrying Place, longitude west, 96 57 00 W.		
A Sandy Bay, nigh the End of Swampy Lake, Head of Hill River,		55 19 00 N.
Ditto, Ditto, longitude west 94 15 00		
1764. Quebec, latitude } Samuel Holland, Esq.		46 48 30 N.
Longitude from Greenwich, 71 12 06		
1776. Muskitto Cove, latitude		64 55 [illegible] N.
Longitude west from Greenwich, Lieutenant Pickergell, 53 03 45		
Cape Farewell, latitude,		59 38 0 N.
*Cape Farewell, longitude, 42 42 00		
1784. And 1785 Saint John's, Newfound Land, latitude,		47 32 0 N.
Longitude from Greenwich, Admiral Campbell, 52 29 00		
1764. Burgeo Isles, latitude,		47 36 20 N.
Longitude from Greenwich, Captain Cook 57 36 30		
Louisbourg, latitude		45 54 00 N.
Longitude from Greenwich,		59 55 00 W.
Charlotte Town, latitude	Mr. Wright.	46 14 00 N.
Charlotte Town, longitude		62 50 00 W.
Isle Anticoste, S. W. Point, latitude		49 22 00 N.
Isle Anticoste, S. W. Point, longitude		63 42 30 W.

* Cape Farewell here meant, is that Land seen by the Lion Brig, in 1776.

...rvations between MISHIPICOTON *and* LAKE WINNIPEG.
By Mr. VANDRIEL, 1791.

	LATITUDE.
...ef du Pic, Lake Superior	48° 36′ 11″
Grand Portage	48 11 18
Longitude by ☉ and ☽ — 89° 41′ 06″	
...e Lake	48 1 41
...est End of the New Portage	48 4 27
...ight of Land Portage	48 5 40
...ooden Horse Portage	48 8 04
White Wood Portage	48 1 45
Longitude by ☉ and ☽ — 93 12 05	
...the Narrows, Lac la Pluie	49 3 02
...t Lac la Pluie	48 35 49
...nd Portage	50 7 31
At the Barrier	50 7 51
Longitude by ☉ and ☽ — 95 8 30	
...the Provision Store, bottom of the River Winnipeg,	50 33 12

Astronomical Observations made at NOOTKA *and the following Places,*
By Captain COOK, *in* 1778.

Latitude of the Observatory	Sun	49°	36′	1″ 15‴
	Stars South	49	36	8 36
	Stars North	49	36	10 30
Mean of these means		49	36	6 47 N.

LONGITUDE.

20 Sets taken on the 21st and 23d of March	233°	26′	18″ 7‴
93 Sets taken at the Observatory	233	18	6 6
24 Sets taken on the 1st, 2d, and 3d of May	233	7	16 7
Mean of all	233	17	44 0 E.

But by reducing each set taken before they arrived in the Sound and after they left it, by the Time-keeper, and adding them up with those made on the spot, the mean of the 137 sets will be	233	17	30	5 E.	per Lunar.
	or				
	126	42	29	55 W.	
	19	44	37	30 Var. E.	
Time-keeper, Greenwich Rate,	233	46	51		
Time-keeper, Ulietea Rate,	233	59	24		

	In the Harbour of SAMGANOODHA.	LATITUDE.
Captain Cook's Voyages, Vol. II. Page 523	Latitude by the mean of several meridian altitudes	52° 55′ 00″ N.
	Longitude by the mean of twenty sets of Lunar Observations, the ☉ E.	193 47 45 E.
	By the mean of fourteen sets, the ☉ west	193 11 45
	Mean	193 29 45 E.
	Variation 19° 59′ 15″ East,	166 30 15 W.

	At SHOAL NESS.	
Page 436	Latitude of Ship's place	59 37 30 N.
	Longitude by a great number of Lunar Observations made during five days, all reduced to the Ship's station, gave	197 45 48 E.
	Or	162 14 12 W.
	By the Time-keeper	197 26 48
	Variation	22 56 51 E.

	CHACKTOOLE BAY, NOTON SOUND.	
Page 486	Latitude	64 31 00 N.
	Longitude from 77 sets of Lunar Observations, mean	197 13 00 E.
	Or	162 47 00 W.
	Variation	25 45 00 E.

SPEEDILY WILL BE PUBLISHED,

BY A. ARROWSMITH,

A MAP

OF THE

UNITED STATES

OF

NORTH AMERICA.

Finished

A

COMPANION

TO A

MAP OF THE WORLD.

BY

A. ARROWSMITH.

LONDON:

PRINTED BY GEORGE BIGG,

FOR THE AUTHOR, CHARLES STREET, SOHO SQUARE, 1794.

As the Earth is of a form approaching very near to a Globe, or Sphere, it is evident that the only Map which can truly repreſent the figure of the various countries, and their relative bearings and diſtances, muſt be delineated on the ſurface of a Globe.

But as Globes of a ſize proper to exhibit a Map ſufficiently accurate, and containing all the information that is neceſſary or deſirable, muſt be very bulky, and very expenſive, it is neceſſary to have more portable and cheaper Maps, executed upon a flat ſurface; theſe, ſince the art of copper-plate printing has been in uſe, have generally been made upon paper.

It is obvious, that ſuch a Map, wherein is attempted to repreſent upon a plane ſurface that which is really ſpherical, muſt depart conſiderably from the truth; eſpecially if it comprehends the whole, or a conſiderable portion of the world. It has, therefore, been an object which has engaged the attention of the moſt eminent geographers, to diſcover a projection (or arrangment of the proportional parts of the Map) which ſhould be liable to the feweſt errors.

The moſt natural method of repreſenting a ſphere upon a plane ſeems to be to divide it into two equal parts, and inſcribe each of them in a circle: but as the equator, and the polar axis, which interſects that circle at right angles, and makes one of the meridians, muſt be ſuppoſed equal in length to the half of the periphery, (of which it is not quite two-thirds) it follows of courſe, that the countries delineated upon, or near, theſe lines, muſt be reduced

reduced to ſomewhat leſs than two-thirds of the ſize of the countries of equal extent, which lie at the extremity of the circle; and that the lines drawn to meaſure the latitude, which are parallel to each other, or nearly ſo, muſt, in order to preſerve as nearly as poſſible their proportional angles at the points of interſection with the meridians, form ſegments of circles, of which no two are parallel or concentric.

There may be as many different projections as there are points of view in which a globe can be ſeen, but geographers have generally choſen thoſe which repreſent the poles, at the top and bottom of the Map; theſe, from the delineation of the lines of latitude and longitude are called the ſtereographic, orthographic, and globular projections.

I do not propoſe to detain the reader with a deſcription of all the projections; ſome of which are ſo erroneous (for the purpoſe of conſtructing of Maps) as to deſerve being conſigned entirely to oblivion. But as projections of Maps is a pleaſing and inſtructive exerciſe, and indeed indiſpenſably neceſſary to the right underſtanding of Geography to ſtudents, I ſhall deſcribe the manner of conſtructing the Map that accompanies this work.—But firſt hint at the Stereographic Projection.* Among the various poſitions aſſignable to the eye, there are chiefly two that have been adopted, wherein the eye is placed either in the points (D. fig. 1.) or removed to an infinite diſtance; and hence this projection is liable to the great error of diſtorting the form of the countries repreſented upon it much more than is neceſſary. The only advantage is, that the lines of latitude and longitude interſect each other at right angles.

This

* The great geographer, *D'Anville*, has conſtructed his Map of the World upon this projection, adapting it to *Caſſini*'s ſyſtem of the figure of the earth, which makes the polar diameter long r than the equatorial.

This being obſerved by that excellent aſtronomer, *M. de la Hire*, * he invented a remedy for the inconvenience, by aſſigning to the eye a poſition at the point (c. fig. 1.) the diſtance of which from the globe at D is equal to the right line of 45 degrees; and hence the right line G O, which biſects the quadrant B C, alſo biſects the radius E C, and produces the ſimilar triangles O F G, and O E I; and thus the other parts of the quadrant B C, and in like manner of the whole ſemicircle A B C, are repreſented in the projection nearly proportionable to each other, and to ſenſe perfectly ſo. The delineation of the earth and ſea upon this projection, which, as coming the neareſt to a true repreſentation of the globe, is called the Globular Projection: it is equal to the Stereographic in point of facility, and vaſtly ſuperior to it in point of truth.

Geometrical Conſtruction of the GLOBULAR PROJECTION.

From the center, (c. fig. 2.) with any radius, as C B, deſcribe a circle; draw the diameters A B, and 90 90, (be careful to draw them at perfect right angles) and divide them into nine equal parts; likewiſe divide each quadrant into nine equal parts, each of which contains ten degrees; if the ſcale admits of it every one of theſe diviſions may be ſubdivided into degrees: next, to draw the meridians, ſuppoſe the meridian 80° W of *Greenwich*, we have given the two poles 90 90, and the point 80 in the equator, or diameter A B; deſcribe a circle to paſs through the three given points as follows; with the radius 90 ſet one foot of the compaſſes on the point 90, and deſcribe the ſemicircle X X and Z Z, then remove the compaſſes to the point 80 on the equator, and deſcribe the arcs 1 1 and 2 2; where they interſect the ſemicircle make the point, as at 1 and 2, and draw lines from 2 through the point 1 till they interſect the diameter B A continued in E, then will E be the center from whence

* Hiſt. Acad. Scient. 1701.

whence the meridian 90 80 90 muſt be drawn, and will expreſs the meridian of 80° W longitude from *Greenwich*; the ſame radius will draw the meridien expreſſing 140° W longitude, in like manner: draw the next meridian with the radius C B, ſet one foot of the compaſſes in the point d, and deſcribe the arcs a a and b b, then draw lines as before, will give the point D, the center of 90° W longitude, and ſo of all the reſt.

The parallels of latitude are drawn in the ſame manner, with this difference, that the ſemicircles x x and z z muſt be drawn from the points A and B, the extremities of the equator.

In the manner above deſcribed, with great labour and exactneſs, I drew all the meridians and parallels of latitude to every degree on two hemiſpheres, which laid the foundation of the Map now before us.

We ſhall now drop a few hints on the advantage and diſadvantage of Mercator's Projection.

A method has been found to obviate ſome of the difficulties attending all the circular projections by one, which, from the perſon who firſt uſed it, (though not the inventor) is called *Mercator's* Projection. In this there are none but right lines; all the meridians are equidiſtant, and continue ſo through the whole extent; but, on the other hand, in order to obtain the true bearing, ſo that the compaſs may be applied to the Map (or Chart) for the purpoſe of navigation, the ſpaces between the parallels of latitudes (which in truth are equal, or nearly ſo) are made to increaſe as they recede from the equator in a proportion which, in the high latitudes, becomes prodigiouſly great.

The great advantages peculiar to this projection are, that every place drawn upon it retains its true bearing with reſpect to all other places;

places; the diſtances may be meaſured with the niceſt exactneſs by proper ſcales, and all the lines drawn upon it are right lines. For theſe reaſons it is the only projection in drawing maps or charts for the uſe of navigators.

Its only diſadvantage is, that the countries in high latitudes are of neceſſity encreaſed beyond their juſt ſize to a monſtrous degree.

Thus it appears, from this ſhort view of three of the beſt modes of projecting of Maps of the World upon a plane ſurface, that each of thoſe which have been more p rticularly deſcribed is attended with advantages and diſadvantages peculiar to itſelf; it is obvious, that the only means to acquire a juſt idea of the various countries upon ſuch a ſurface is by a compariſon of two maps, one laid down on the Mercator's Projection, and the other upon the beſt of the Circular Projection.

In the year 1790 I publiſhed a Chart of the World upon Mercator's Projection, on a ſcale of five equatorial degrees to one inch, with a proper appendage of ſcales for the exact menſuration of diſtances upon every part of the Map, which represented all the countries and iſlands of the world then diſcovered.

I now offer to the public a Map conſtructed upon a Globular Projection, upon the ſame ſcale as the Mercator's Chart, five equatorial degrees to an inch, in order to exhibit the contraſt between the two beſt projections, upon which general Maps of the World can be conſtructed.

I have ſpared neither labour nor expence in procuring information to render both Maps as accurate, and as full of information, as their ſize can poſſibly admit; and have carefully inſerted the routes of ſuch voyages as were undertaken with a ſcientific view, which, if they do not delineate lands, anſwer another great purpoſe,

poſe, by ſhewing that no lands exiſt in the tracts of the reſpective voyages; the routes made by judicious travellers through countries hitherto little known to Europeans are alſo delineated.

The great approbation my Mercator's Chart met with from the public, makes me flatter myſelf that the preſent one, with the enlarged information accruing from the aſſiduous application of three years more to the collection of materials, will be found not leſs worthy of the public patronage.

The knowledge of a great number of iſlands, and the corrected poſitions of ſome hundreds of places, have been obtained by the favour of gentlemen who kindly communicated their diſcoveries and obſervations.

All theſe advantages render this Map as different from a Map of the World merely copied, or reduced from other maps, as any two things bearing the ſame name can poſſibly be, and conſtitute it, as far as the name can apply to a map, an original work.

For the benefit of the ſtudents of geography, I have herewith given a Quadrant of an Hemiſphere (ſee the plate), with the meridians and parallels of latitude to every degree, drawn on the ſame ſcale with the Map, whereby with the help of a pair of compaſſes the exact poſition of any place may be found. This ſcale may alſo ſerve as a criterion to ſuch gentlemen as are in poſſeſſion of real aſtronomical obſervations.

We now proceed to give ſome Rules for meaſuring Diſtances.

As the meaſured diſtance from one point to another, upon a plane ſurface, is meaſured by a right line connecting the two points, ſo the neareſt diſtance from one point to another, upon a ſpherical ſurface, is meaſured by an arc of a great circle paſſing through the two points.

The

The diſtance of places on the globe may be aſcertained from their latitude and longitude, by the help of a line of chords, in ſix different manners, according as the caſes happen to be.

CASE I.

If both places are under the equator, the difference of longitude is diſtance.

CASE II.

If both places are under the ſame meridian, their difference of latitude is their diſtance.

CASE III.

If only one of the places have latitude (the other being on the equator) and they have different longitudes:

EXAMPLE. (Fig. 3.)

Required the diſtance between the iſlands *Bermudas* . . . . } 32° 35′N, long. 64° 33′W
and *St. Thomas's* . . . . . 00. 00 . . . 7. 30 E

With the chord of 60° deſcribe a circle repreſenting the equator from the point C
(Aſſumed at pleaſure to repreſent the beginning of longitude.)

Apply the chord of *Bermudas's* longitude . 64° 33′ to	B
Apply the chord of *St. Thomas's* longitude . 7. 30 to	A
The difference of longitude is the arc	AB
From the place having latitude	B
Draw the diameter	BD
From the point	B
Extend the chord of the latitude 32° 35′ to	E
Draw the line	EF
At right angles with the diameter	BD
Draw the line	FC
From the point	F
With the diſtance	FC
Upon the diameter	BD
Make the point	G
Draw the line	EG

Which being meaſured on the line of chords will give 75° * equal to 1500 leagues.

CASE

* N. B. When degrees are uſed as a meaſure, they muſt always be underſtood as equatorial degrees, each of which contains ſixty geographical miles, or twenty marine leagues.

CASE IV. (Fig. 4.)

If both places are in the same latitude.

EXAMPLE.

Required the distance between the *Lizard* . . . . . latitude 49° 56′N, long. 5° 15′W
and *Cape Freels* in *Newfoundland* . . 49. 56N. . . 53. 15W

From the commencement of longitude	C
Apply the chord of the *Lizard's* longitude 5° 15′ to	A
From	C
Apply the chord of *Cape Freels* longitude 53° 15′ to	B
The arc	AB

Is the difference of longitude.

Draw the diameter	Aa Bb
Apply the chord of the common latitude 49° 56′ from . . .	A to D
And from	B to E
Draw DF and EG at right angles to	Aa Bb
And join	GF

Then GF measured on the scale of chords will give the distance about 30° 30′= 610 leagues. *

CASE

---

* This case may be solved more expeditiously by multiplying 48° the difference of longitude, by 38,57, the miles contained in one degree of longitude in the latitude of 50° which gives 1851,36 miles, equal to 617 leagues.

CASE V. (Fig. 5.)

If the places are on the ſame ſide of the equator, and differ both in latitude and longitude.

EXAMPLE.

Required the diſtance between *London* . . . . . } lat. 51° 31′N, long. 0° 5′ 37″W

and *Bombay* . . . . . 19. 00 N . 72. 38. 00 E

The places being on oppoſite ſides of the firſt meridian, the two longitudes muſt be added together, and give for difference of Longitude } 72. 43. 37

From the longitude of *London* at . . . . . A

Apply the chord of the difference of longitude, 72° 43′ 37″, to the point C

Apply the chord of the latitude of *London*, . 51. 31 0, from . A to B

Apply the chord of *Bombay's* latitude, . . 19. 00 0. from . C to D

Draw the Diameters . . . . . Aa Cc

And draw BE DF at right angles to . . . . . Aa Cc

Join . . . . . FE

Make BG equal to DF, and EH equal to EF, join . . . . GH

Then GH meaſured on the chords, will give the diſtance 64° 30′, equal to 1290 leagues.

CASE

CASE VI. (Fig. 6.)

If the places are on oppofite fides of the equator, and differ both in latitude and longitude.

EXAMPLE.

Required the diſtance between *Cape Horn*	lat. 55° 58′S,	long. 67° 46′W
and *Owhyhee*	19. 30N .	155. 30W
	Difference of longitude .	87. 44

Both places having weſt longitude, the leſſer muſt be ſubtracted from the greater for the difference of longitude.

Apply the difference of longitude, 87° 44′, from . . .	A to C
Draw the diameters	Aa and Cc
Apply the chord of *Owhyhee's* latitude, . 19° 30′, from . .	A to B
Apply the chord of *Cape Horn's* latitude, . 55. 58, from . .	C to D
Draw	BE and DF
At right angles to	Aa and Cc
Join	EF
And make	EG
Equal to	EF
At right angles to	Aa draw GH
And make	GH equal to DF
Join	BH

Which meaſured on the chords, will give the diſtance about 106° 30′, equal to 2130 leagues.

Fig. 7. is a blank circle, with a line of chords adapted to it, whereby the ingenious youth may exerciſe himſelf in the practice of the above, or any of the following caſes of diſtances, by drawing pencil lines, which can be taken out at the reſult of each operation.

I ſhall

I ſhall here ſubjoin a few examples of direct diſtances meaſured.

	LEAGUES.
From *Plymouth* to *Madeira*	403
Madeira to *St. Jago*	369
St. Jago to *St. Helena*	706
St. Helena to the Cape of *Good Hope*	570
Cape of *Good Hope* to the Iſle of *Deſolation*	811
Iſle of *Deſolation* to *Adventure* Bay	1078
Adventure Bay to Port *Jackſon*	220
Adventure Bay to *Queen Charlotte* Sound	400
Queen Charlotte Sound to *Otaheite*	784
Otaheite to *Owhyhee*	754
Owhyhee to *Awatſcha*	980
Owhyhee to *Nootka*	740
St. Jago to *Rio Janiero*	840
Rio Janiero to *Cape Horn*	760
Cape Horn to *Otaheite*	1465
Cape Horn to *Owhyhee*	2130
Owhyhee to *Cook's* River	800
Queen's Charlotte's Iſles to the Eaſt Coaſt of *Labrador*	970
London to the *Orkneys*	150
Orkneys to *Cape Farewell*	450
Cape Farewell to *Diſco*	230
London to *Smeerinburg* in *Spitzbergen*	570
Petersburg to the *Eaſt Cape* in *Ruſſia*	1320
Maſſuah in the *Red* Sea to Cape *Verd*	1050
Maſſuah to *Ceſſnah* in the centre of *Africa*	530
Whidah on the Coaſt of *Guinea* to *Coſheah*	240
Cape Coaſt on the Coaſt of *Guinea* to *Caſhna*	310
Mouth of *Gambia* River to *Tombuctoo*	330
Tunis to *Tombuctoo*	420
Tripoli to *Cairo*	340
Caſhna to *Tombuctoo*	250
Tombuctoo to *Cairo*	640
Cairo to *Caſhna*	480

As the knowledge of the heights of the greateſt mountains above the level of the ſea, is very uſeful for giving a proper idea of the ſurface of the globe, and cannot be introduced in a general

Map, unleſs it were on a very large ſcale, a few of the moſt remarkable throughout the world are given as follows:

	ENG. FEET.
Mount Blanc, the higheſt of the *Alps*, and of all *European* mountains, meaſured by Sir *George Shuckburgh*	15,662
Peak of *Teneriffe*, meaſured by *Feuille*	13,248
Ætna, meaſured by Sir *George Shuckburgh*	10,954
Veſuvius, meaſured by M. de *Sauſſure*	3,900
Ben-Nevis, in *Inverneſs* ſhire	4,387
Snowden, in *Wales*, meaſured by general *Roy*	3,568
Chimboraco, the higheſt of the *Cordelleras*, according to *Condamine* 3000 toiſes, equal to	19,224
(This mountain is covered with perpetual ſnow, 2400 feet from the ſummit.)	
Pitchincha near *Quito*	15,571
Caracon near D°	15,827
(Theſe two mountains ſerved as ſtations for meaſuring a degree of the meridian in *Peru.)*	

The higheſt mountains in *Norway*, &c.

Kinnekulle, in *Weſtro-Gothia*, is 931 *Engliſh* feet above the level of the ſea, or 815 above lake *Wenern*.

Areſkutan, a ſolitary mountain of *Jæmland*; is ſaid to be 6162 *Engliſh* feet above the neareſt rivers.

Swuckuſſon, within the borders of *Norway*, 4658 above lake *Famund*, and that lake is thought to be near 2000 or 3000 above the ſea.

Syſſaelen on the borders of *Jæmland*, 3132 feet perpendicular from the heig ht to the baſe.

By ſome late experiments, the higheſt mountains of *Sweden*, between lat. 63° and 64° have been found to be 6,652 feet above the ſurface of the *Baltic*. *

The following comparative view of the lengths of courſe of ſome of the moſt noted rivers in the world, as eſtimated by maj,or

* *Pennant's Arctic Zoology*, page 108.

major *Rennell*,* is alſo very uſeful in giving an idea of the great features of the ſurface of the earth.

EUROPEAN RIVERS.

Thames, aſſumed as the ſtandard of unity	1
Rhine	5½
Danube	7
Volga	9½

ASIATIC RIVERS.

Indus (probably)	6½
Euphrates	8½
Ganges	9½
Barrampooter	9½
Nou Kian or *Ava*	9½
Eriſſea	10
Oby	10½
Amour	11
Lena	11½
Hoangho (CHINA.)	13½
Kian Keu (L^e)	15½

AFRICAN RIVERS.

Nile	12½

AMERICAN RIVERS.

Miſſiſippi	8
Amazons	15½

The Meaſure of the Earth.

To find the meaſure of the Earth is a problem of ſuch importance, that it has engaged the attention of the greateſt philoſophers in all ages. About 250 years before the birth of CHRIST, *Eratoſthenes* diſcovered that the difference of latitude between *Syene* and *Alexandria* (both in *Egypt*) was one-fiftieth part of a great circle; and, from meaſuring of the diſtance, he inferred that

* Memoir of a Map of *Hindooſtan*, 1792.

that the circumference of the whole earth was 252,000 ſtadia, equal to about 10,416 leagues, which is above the truth, but wonderfully near conſidering the infant ſtate of ſcience, and the imperfection of inſtruments in his time.

Hipparchus and *Dionyſadorus* after him calculated the meaſure of the Earth, and differed from him but little. *

It would be ſuperfluous to enumerate the attempts of all the philoſophers who have laboured to aſcertain this point. I ſhall therefore paſs to that of the eminent mathematician *Richard Norwood*, of which an account is given in his *Seaman's Practice*, the ſubſtance of which is as follows: In the year 1633, he obſerved the apparent meridian altitude of the Sun, at the time of the ſummer ſolſtice, near the tower of *London*; and June 11th, 1635, (old ſtile) he obſerved the Sun's apparent meridian altitude near the middle of the city of *York*, from whence he found the difference of latitude between thoſe places to be 2° 28′. This being compared with the difference between the parallels of latitude of thoſe places, deduced from actual menſuration, which was 9,149 chains of 99 feet each, he found that one degree contained 367,196 *Engliſh* feet, or nearly 69½ *Engliſh* miles to one degree. However, as *Norwood* paced ſome of his diſtances, the above meaſure is therefore only an approximation to the truth. In latitude 52° a degree on the meridian will be extremely near to 69.1767 *Britiſh* miles, or 69 miles 310 yards, ſtatute meaſure.

After this time it was obſerved, that pendulum clocks which were conſtructed to beat ſeconds in the latitudes of *London* † and *Paris*, when carried to countries near the equator, moved ſlower, and the pendulums were obliged to be ſhortened about ,128 of an inch,

* Plin. Hiſt. Nat. L. II. c. 73, 108, 109.

† The length of pendulums for the latitude of *London*, to vibrate ſeconds, is 39.128 inches; at the equator 39 inches, and at the poles 39.2065.

much, in order to make them keep time with the motion of the celeſtial bodies. The great philoſophers *Newton* and *Huygens* obſerving that difference in the motion of the pendulum was greater than could be aſcribed to the mere increaſe of heat, ſet themſelves to diſcover the cauſe, and account for it on more ſatisfactory principles. The reſult of their inveſtigations was, that the earth was not in the form of a perfect ſphere, but an oblate ſpheroid, reſembling an orange, and depreſſed 17 miles at each pole; and that conſequently the length of the equatorial diameter exceeds that of the polar 34 miles, or in the proportion of 230 to 229.

Many of the *French* philoſophers embraced an opinion the very reverſe of Sir *Iſaac Newton's*, aſſerting that the figure of the Earth approached to that of a lemon, the polar axis being longer than the equatorial.

Louis XV, king of *France*, obſerving that theſe diſcordant opinions had for ſome time obſtructed the general progreſs of ſcience, reſolved to have the truth of the matter aſcertained by actual menſurations, to be made by men of ſcience in diſtant parts of the globe, at his own expence. As it was admitted on all hands that the Earth was a ſpheroid, though philoſophers differed widely as to the figure of the ſpheroid, it was evident that a degree of the meridian muſt be of different lengths in different latitudes, and that from a compariſon of accurate menſurations to be made in very diſtant parts of the world, the deciſion of the point in queſtion would be obtained; and it would be known to a demonſtration, whether the earth be an oblate ſpheroid, as aſſigned by *Newton* and *Huygens*, or an oblate ſpheroid, according to the opinion of *Caſſini* and ſeveral other philoſophers.

A degree of the meridian had been meaſured by M. *Picart* in 1670 between *Paris* and *Amiens*, the middle point of which was

in latitude 49° 22'N, and found to be 57,060 toiſes, * and in 1701, the ſame was re-meaſured by *Caſſini*.

It was determined to compare this meaſurement with that of a degree to be meaſured near the equator, and of another to be meaſured as near the north pole as the rigour of the climate would permit.

The company deſtined to the ſouthern expedition conſiſted of Meſſrs. *Jodin*, *Bougur* and *de la Condamine*, of *France*; to whom were joined *Don Jorge Juan* and *Don Antonio de Ulloa*, of *Spain*. Theſe mathematicians ſailed from *Europe* about the middle of the year 1735, and commenced their operations in the province of *Quito* in *Peru* about October, 1736; which, after many interruptions, they compleated in eight years.

M. *Bougur* fixed the length of a degree of the meridian at the equator at 56,753 toiſes, when reduced to the level of the ſea; and the proportion of the equatorial diameter to the polar as 179 to 178, or as 1 to 0.99441.

M. *de la Condamine* gave for the meaſure of a degree at the equator 56,749 toiſes, differing only four toiſes from that of M. *Bougur*.

The *Spaniſh* gentlemen, who publiſhed their accounts ſeparately, gave 56,767 toiſes to a degree of the meridian at the equator; and made the proportion of the equatorial to the polar axis as 266 to 265, or 1 to 0.99624.

The gentlemen appointed for the northern expedition were Meſſrs. *Maupertius*, *Clairaut*, *Camus*, *le Monniere*, and *Outhier*, of *France*,

* A meaſure containing 6 *French* feet, or 6 feet 4⅘ inches *Engliſh* nearly; the *French* foot being to the *Engliſh* as 1 to 1,0654.

France, with whom was associated M. *Celsius*, an eminent astronomer of *Upsal* in *Sweden*. This company proceeded to *Swedish Lapland*, and began their operations in July 1736, which finished in the following May. They found that a degree of the meridian, the middle point of which was in the latitude of 66° 20′N, measured, when reduced to the level of the sea, 574,389 toises; and that the equatorial diameter exceeded the polar in the proportion of 1 to 0.9891.

It may not be improper just to mention, that each of the companies of philosophers made many discoveries in several other departments of science, besides those in astronomy and geography, which were the principal objects of their mission.

In 1752 M. *de la Caille* being at the cape of *Good Hope*, measured a degree of the meridian, the middle point of which was in latitude 33° 18′S, which he found to contain 57,037 toises.

In 1755 Father *Boscowich* measured a degree between *Rome* and *Rimini*, the middle point of which was in latitude 43°N, and found its length to be 56,972 toises.

In 1740 Messrs. *Cassini*, *Junier* and *de la Caille* revised the measurement formerly made in *France*, and after making the necessary corrections, they fixed the length of a degree, the middle point of which is latitude 49° 22 N, at 57,074 toises.

They also measured a degree, of which the latitude was 45°N, the middle point, and found it 57,050.

Thus the different lengths of a degree of the meridian, as ascertained by actual mensurations, are as follows:

1736.

		MIDDLE POINT.	TOISES.
1736-1737	*Maupertius* and aſſociates, in latitude 66° 20′, found		57,438
1670-1701	*Caſſini* and *de la Caille*	49. 22	57,074
		45. 00	57,050
1755	*Boſcowich*	43. 00	56,972
1752	*De la Caille*	33. 18	57,037
1736-1743	*Juan* and *Ulloa*		56,768
	Bouguer		56,753
	De la Condamine		56,749

From a compariſon of the whole of the above meaſurements, it appears that the ratio of the greater axis to the leſſer, which is as 230 to 228.92974, or very near the ratio aſſigned by *Newton*; and the

Equatorial diameter	7,940,596	BRITISH MILES.
Polar diameter	7,903,648	
	36,948	

Before I cloſe this Treatiſe, the reader will excuſe me in indulging my gratitude (and perhaps my vanity) by acknowledging the liberal aſſiſtance generouſly communicated, in order to render this Map as correct as poſſible, by ſeveral gentlemen, whoſe zeal for the advancement of uſeful knowledge can only be equalled by their great eminence in the branches of ſcience to which they have devoted their ſtudies.

My thanks are particularly due to

The Honorable Company of Merchants trading to *Hudſon's Bay*, for their liberal communications of their ſeveral MSS Maps and Charts, laid down from ſurveys and aſtronomical obſervations executed by their orders, by Mr. PHILIP TURNOR.

ALEXANDER DALRYMPLE, Eſq. F. R. S. whoſe geographical knowledge and attention to the improvement of the art are far above my praiſe; who generouſly preſented me the whole of his valuable

valuable geographical publications, conſiſting of 632 Maps, Charts, Plans, &c acompanied with near 2,000 pages of letter-preſs, with the uſe of ſeveral MSS; whence I have been enabled to aſcertain many doubtful poſitions.

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——— NW Coast of, from 48° to 55° N latitude, by Lieut. Colnett, large MS	1787
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Frobiſher's Diſcoveries in	
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Greece,	

* At the peace of *Utrecht*, *France*, what was under ſubjection, was compelled to cede the navigation of the river *Amazon*, together with the lands which extended as far as the river *Vincent Pinſon*, or the *Oyapoc*; when the time fixed for the execution of the treaty arri[ved] it was found that theſe two words, which were employed as ſynonymous, we[re] ſcribed in the country, as well as in the ancient maps, as two rivers

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Labrador, from Cape Charles to Lat. 54^d Lieut. Lane, 2 sheets	1777
Louisiana, History of, by Le Page du Pratz, 2 vol. 12mo.	1763

Mississippi,

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rivers 30 leagues distant from each other. Both courts were equally desirous of turning this error to their own advantage; the court of *Lisbon* wished to extend its boundaries as far as the *Oyapok*, and that of *Versailles* as far as *Vincent Pinzons* bay: nothing could be determined upon, and the contested lands have remained desert ever since.

DATE.

Miſſiſippi, Courſe of the, 2 ſheets.
Magellan, Strait of, 1 ſheet, Spaniſh.
Moldavia, by General Bahwr, 6 ſheets.

Neptune Oriental, 1 vol. folio, by D'Apres 1775
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Ruſſian

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Sicily, 4 ſheets.	
Spain and Portugal, by Lopez, 1 ſheet	1779
——— by Mantel, 6 ſheets.	
Songar Calmucks (with Memoir) by Iſlemief, 1 ſheet	1737
Shetland Iſles, by Preſton, 1 ſheet.	
Scotland, by Ainſlie, 9 ſheets	1789
——— Weſt Coaſt of, by Capt. Huddert, 3 ſheets	1790
Spitzbergen, by Van Kulen, 2 ſheets. (This Chart is uſed by the Dutch Whalers.)	
——— Voyage to, 4to. Phipps	1773
Timur Bec, Hiſtory of, by Petit de la Croix, 2 vol. 8vo.	1723
Tartary, 4 ſheets, by Witſen	1687
White Sea, Ruſſian MS.	
——— by Pettyt, 2 ſheets	1755
——— by Holman, 1 ſheet	1761
Weſt Indies, by Jeffreys, 16 ſheets, corrected to	1792
Weſt India Pilot, by Speers.	

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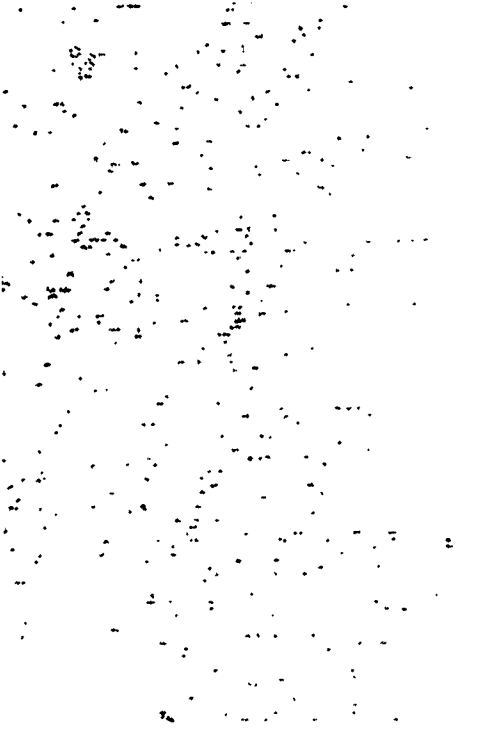

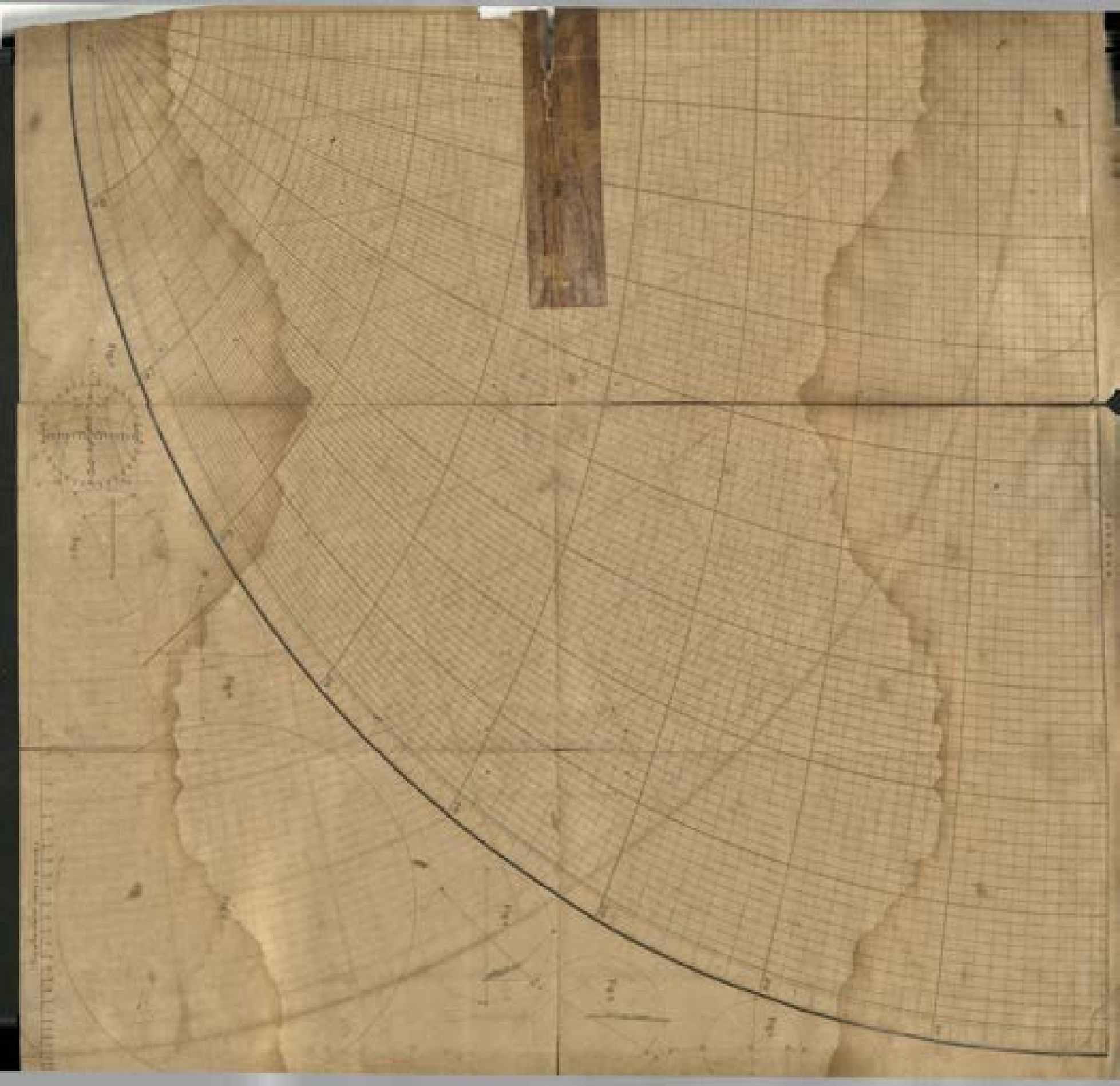

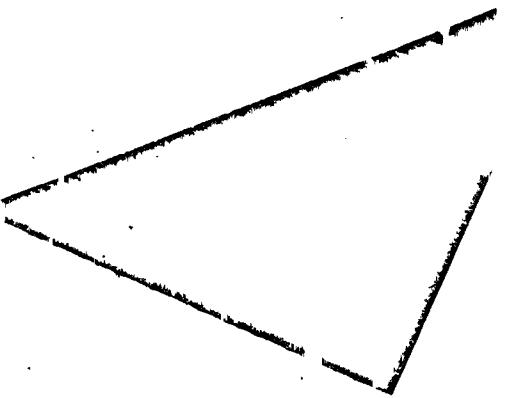

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